

References

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ttc Phe 145	ccg Pro	ggc Gly	gcg Ala	acc Thr	atg Met 150	tgg Trp	aac Asn	ccg Pro	aac Asn	acg Thr 155	ccc Pro	ctg Leu	tcc Ser	gag Glu	gac Asp 160	480
tgt Cys	ctg Leu	tac Tyr	att Ile	aac Asn 165	gtg Val	gtg Val	gca Ala	ccg Pro	cga Arg 170	ccc Pro	cgg Arg	ccc Pro	aag Lys	aat Asn 175	gcg Ala	528
gcc Ala	gtc Val	atg Met	ctg Leu 180	tgg Trp	atc Ile	ttc Phe	ggc Gly	ggc Gly 185	ggc Gly	ttc Phe	tac Tyr	tcc Ser	ggc Gly 190	acc Thr	gcc Ala	576
acc Thr	ctg Leu	gac Asp 195	gtg Val	tac Tyr	gac Asp	cac His	cgg Arg 200	gcg Ala	ctt Leu	gcg Ala	tcg Ser	gag Glu 205	gag Glu	aac Asn	gtg Val	624
atc Ile	gtg Val 210	gtg Val	tcg Ser	ctg Leu	cag Gln	tac Tyr 215	cgc Arg	gtg Val	gcc Ala	agt Ser	ctg Leu 220	ggc Gly	ttc Phe	ctg Leu	ttt Phe	672
ctc Leu 225	ggc Gly	acc Thr	ccg Pro	gaa Glu	gcg Ala 230	ccg Pro	ggc Gly	aac Asn	gcg Ala	gga Gly 235	ctg Leu	ttc Phe	gat Asp	cag Gln	aac Asn 240	720
ctt Leu	gcg Ala	cta Leu	cgc Arg	tgg Trp 245	gtg Val	cgg Arg	gac Asp	aac Asn	att Ile 250	cac His	cgg Arg	ttc Phe	ggt Gly 255	ggt Gly	gat Asp	768
ccg Pro	tcg Ser	cggt Arg	gtg Val 260	aca Thr	ctg Leu	ttc Phe	ggc Gly	gag Glu 265	agt Ser	gcc Ala	ggt Gly	gcc Ala	gtc Val 270	tcg Ser	gtg Val	816
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atc Ile	ctg Leu 290	cag Gln	agc Ser	ggc Gly	tcg Ser	ccg Pro 295	acg Thr	gca Ala	ccg Pro	tgg Trp	gca Ala 300	ttg Leu	gta Val	tcg Ser	cggt Arg	912
gag Glu 305	gaa Glu	gcc Ala	acg Thr	cta Leu	aga Arg 310	gca Ala	ctg Leu	cggt Arg	ttg Leu	gcc Ala 315	gag Glu	gcgt Ala	gtc Val	ggc Gly	tgc Cys 320	960
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tgc Cys	gag Glu	ttc Phe 355	ccg Pro	ttc Phe	gtg Val	ccg Pro	gtg Val 360	gtc Val	gac Asp	ggt Gly	gcgt Ala	ttc Phe 365	ctg Leu	gac Asp	gag Glu	1104
acgt	ccgt	cagt	tcgt	ctc	gcc	agc	gggt	cggt	ttc	aagt	aagt	acgt	gagt	atc		1152

263365US0XPCT															
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Leu	Thr	Gly	Ser	Asn	Thr	Glu	Glu	Gly	Tyr	Tyr	Phe	Ile	Ile	Tyr	Tyr
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ctg	acc	gag	ctg	ctg	cgc	aag	gag	gag	ggc	gtg	acc	gtg	acg	cgc	gag
Leu	Thr	Glu	Leu	Leu	Arg	Lys	Glu	Glu	Gly	Val	Thr	Val	Thr	Arg	Glu
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Glu	Phe	Leu	Gln	Ala	Val	Arg	Glu	Leu	Asn	Pro	Tyr	Val	Asn	Gly	Ala
			420					425					430		
gcc	cgg	cag	gcg	atc	gtg	ttc	gag	tac	acc	gac	tgg	acc	gag	ccg	gac
Ala	Arg	Gln	Ala	Ile	Val	Phe	Glu	Tyr	Thr	Asp	Trp	Thr	Glu	Pro	Asp
		435					440					445			
aac	ccg	aac	agc	aac	cgg	gac	gcg	ctg	gac	aag	atg	gtg	ggc	gac	tat
Asn	Pro	Asn	Ser	Asn	Arg	Asp	Ala	Leu	Asp	Lys	Met	Val	Gly	Asp	Tyr
	450					455					460				
cac	ttc	acc	tgc	aac	gtg	aac	gag	ttc	gcg	cag	cgg	tac	gcc	gag	gag
His	Phe	Thr	Cys	Asn	Val	Asn	Glu	Phe	Ala	Gln	Arg	Tyr	Ala	Glu	Glu
465					470					475					480
ggc	aac	aac	gtc	tac	atg	tat	ctg	tac	acg	cac	cgc	agc	aaa	ggc	aac
Gly	Asn	Asn	Val	Tyr	Met	Tyr	Leu	Tyr	Thr	His	Arg	Ser	Lys	Gly	Asn
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ccg	tgg	ccg	cgc	tgg	acg	ggc	gtg	atg	cac	ggc	gac	gag	atc	aac	tac
Pro	Trp	Pro	Arg	Trp	Thr	Gly	Val	Met	His	Gly	Asp	Glu	Ile	Asn	Tyr
			500					505					510		
gtg	ttc	ggc	gaa	ccg	ctc	aac	ccc	acc	ctc	ggc	tac	acc	gag	gac	gag
Val	Phe	Gly	Glu	Pro	Leu	Asn	Pro	Thr	Leu	Gly	Tyr	Thr	Glu	Asp	Glu
		515					520					525			
aaa	gac	ttt	agc	cgg	aag	atc	atg	cga	tac	tgg	tct	aac	ttt	gcc	aaa
Lys	Asp	Phe	Ser	Arg	Lys	Ile	Met	Arg	Tyr	Trp	Ser	Asn	Phe	Ala	Lys
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acc	ggg	aat	cca	aat	ccc	aac	acg	gcc	agc	agc	gaa	ttc	ccc	gag	tgg
Thr	Gly	Asn	Pro	Asn	Pro	Asn	Thr	Ala	Ser	Ser	Glu	Phe	Pro	Glu	Trp
545					550					555					560
ccc	aag	cac	acc	gcc	cac	gga	cgg	cac	tat	ctg	gag	ctg	ggc	ctc	aac
Pro	Lys	His	Thr	Ala	His	Gly	Arg	His	Tyr	Leu	Glu	Leu	Gly	Leu	Asn
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acg	tcc	ttc	gtc	ggt	cgg	ggc	cca	cgg	ttg	agg	cag	tgt	gcc	ttc	tgg
Thr	Ser	Phe	Val	Gly	Arg	Gly	Pro	Arg	Leu	Arg	Gln	Cys	Ala	Phe	Trp
			580					585					590		
aag	aag	tac	ctt	ccc	cag	cta	gtt	gca	gct	acc	tcg	aac	cta	cca	ggg
Lys	Lys	Tyr	Leu	Pro	Gln	Leu	Val	Ala	Ala	Thr	Ser	Asn	Leu	Pro	Gly
		595					600					605			
cca	gca	ccg	ccc	agt	gaa	ccg	tgc	gaa	agc	agc	gca	ttt	ttt	tac	cga
Pro	Ala	Pro	Pro	Ser	Glu	Pro	Cys	Glu	Ser	Ser	Ala	Phe	Phe	Tyr	Arg
	610					615					620				
cct	gat	ctg	atc	gtg	ctg	ctg	gtg	tcg	ctg	ctt	acg	gcg	acc	gtc	aga
Pro	Asp	Leu	Ile	Val	Leu	Leu	Val	Ser	Leu	Leu	Thr	Ala	Thr	Val	Arg
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ttc	ata	caa	taa												

Phe Ile Gln

<210> 5

<211> 643

<212> PRT

<213> Anopheles gambiae strain KISUMU

<400> 5

Met Phe Val Cys Cys Phe Phe Phe Leu Ser Leu Ser Leu Cys Gly Ser

1

5

10

15

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Glu Glu Ala Thr Leu Arg Ala Leu Arg Leu Ala Glu Ala Val Gly Cys

263365US0XPCT
 305 310 315 320
 Pro His Glu Pro Ser₃₂₅ Lys Leu Ser Asp Ala₃₃₀ Val Glu Cys Leu Arg Gly
 Lys Asp Pro His₃₄₀ Val Leu Val Asn Asn₃₄₅ Glu Trp Gly Thr Leu₃₅₀ Gly Ile
 Cys Glu Phe₃₅₅ Pro Phe Val Pro Val₃₆₀ Val Asp Gly Ala Phe₃₆₅ Leu Asp Glu
 Thr Pro₃₇₀ Gln Arg Ser Leu Ala₃₇₅ Ser Gly Arg Phe Lys₃₈₀ Lys Thr Glu Ile
 Leu₃₈₅ Thr Gly Ser Asn Thr₃₉₀ Glu Glu Gly Tyr Tyr₃₉₅ Phe Ile Ile Tyr Tyr₄₀₀
 Leu Thr Glu Leu₄₀₅ Leu Arg Lys Glu Glu Gly₄₁₀ Val Thr Val Thr Arg₄₁₅ Glu
 Glu Phe Leu Gln₄₂₀ Ala Val Arg Glu Leu₄₂₅ Asn Pro Tyr Val Asn₄₃₀ Gly Ala
 Ala Arg Gln₄₃₅ Ala Ile Val Phe Glu₄₄₀ Tyr Thr Asp Trp Thr₄₄₅ Glu Pro Asp
 Asn Pro₄₅₀ Asn Ser Asn Arg Asp₄₅₅ Ala Leu Asp Lys Met₄₆₀ Val Gly Asp Tyr
 His₄₆₅ Phe Thr Cys Asn Val₄₇₀ Asn Glu Phe Ala Gln₄₇₅ Arg Tyr Ala Glu Glu₄₈₀
 Gly Asn Asn Val₄₈₅ Tyr Met Tyr Leu Tyr Thr₄₉₀ His Arg Ser Lys Gly₄₉₅ Asn
 Pro Trp Pro Arg₅₀₀ Trp Thr Gly Val Met₅₀₅ His Gly Asp Glu Ile₅₁₀ Asn Tyr
 Val Phe Gly Glu Pro Leu Asn Pro Thr Leu Gly Tyr Thr Glu Asp Glu
 515 520 525
 Lys Asp₅₃₀ Phe Ser Arg Lys Ile₅₃₅ Met Arg Tyr Trp Ser₅₄₀ Asn Phe Ala Lys
 Thr₅₄₅ Gly Asn Pro Asn Pro₅₅₀ Asn Thr Ala Ser Ser₅₅₅ Glu Phe Pro Glu Trp₅₆₀
 Pro Lys His Thr Ala₅₆₅ His Gly Arg His Tyr₅₇₀ Leu Glu Leu Gly Leu₅₇₅ Asn
 Thr Ser Phe Val₅₈₀ Gly Arg Gly Pro Arg₅₈₅ Leu Arg Gln Cys Ala₅₉₀ Phe Trp
 Lys Lys Tyr₅₉₅ Leu Pro Gln Leu Val₆₀₀ Ala Ala Thr Ser Asn₆₀₅ Leu Pro Gly
 Pro Ala₆₁₀ Pro Pro Ser Glu Pro₆₁₅ Cys Glu Ser Ser Ala₆₂₀ Phe Phe Tyr Arg
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 Phe Ile Gln

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 <212> DNA
 <213> Culex pipiens strain S-LAB

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 gccgtcactg acgagaagaa aaagaaacaa gagtcgacaa cactctcaca gtctcacgcc 180
 gccagagagc acaccaagag tcacatttag aaaaccacac gccagaagaa aagaagagtt 240
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 <211> 702
 <212> PRT
 <213> Culex pipiens strain S-LAB

<400> 7

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 Ser Val His₃₅ Cys Arg His His Asp₄₀ Ile Gly Ser Ser Val₄₅ Ala His Gln
 Leu Gly₅₀ Ser Lys Tyr Ser Gln₅₅ Ser Ser Ser Leu Ser₆₀ Ser Ser Ser Gln
 Ser₆₅ Ser Ser Ser Leu Ala₇₀ Glu Glu Ala Thr Leu₇₅ Asn Lys Asp Ser Asp₈₀
 Ala Phe Phe Thr Pro₈₅ Tyr Ile Gly His Gly₉₀ Asp Ser Val Arg Ile₉₅ Val
 Asp Ala Glu Leu₁₀₀ Gly Thr Leu Glu Arg₁₀₅ Glu His Ile His Ser₁₁₀ Thr Thr
 Thr Arg Arg₁₁₅ Arg Gly Leu Thr Arg₁₂₀ Arg Glu Ser Ser Ser₁₂₅ Asp Ala Thr
 Asp Ser₁₃₀ Asp Pro Leu Val Ile₁₃₅ Thr Thr Asp Lys Gly₁₄₀ Lys Ile Arg Gly
 Thr₁₄₅ Thr Leu Glu Ala Pro₁₅₀ Ser Gly Lys Lys Val₁₅₅ Asp Ala Trp Met Gly₁₆₀
 Ile Pro Tyr Ala Gln₁₆₅ Pro Pro Leu Gly Pro₁₇₀ Leu Arg Phe Arg His₁₇₅ Pro
 Arg Pro Ala Glu₁₈₀ Arg Trp Thr Gly Val₁₈₅ Leu Asn Ala Thr Lys₁₉₀ Pro Pro
 Asn Ser Cys₁₉₅ Val Gln Ile Val Asp₂₀₀ Thr Val Phe Gly Asp₂₀₅ Phe Pro Gly
 Ala Thr₂₁₀ Met Trp Asn Pro Asn₂₁₅ Thr Pro Leu Ser Glu₂₂₀ Asp Cys Leu Tyr
 Ile₂₂₅ Asn Val Val Val Pro₂₃₀ Arg Pro Arg Pro Lys₂₃₅ Asn Ala Ala Val Met₂₄₀
 Leu Trp Ile Phe Gly₂₄₅ Gly Gly Phe Tyr Ser₂₅₀ Gly Thr Ala Thr Leu₂₅₅ Asp
 Val Tyr Asp His₂₆₀ Arg Thr Leu Ala Ser₂₆₅ Glu Glu Asn Val Ile₂₇₀ Val Val
 Ser Leu Gln₂₇₅ Tyr Arg Val Ala Ser₂₈₀ Leu Gly Phe Leu Phe₂₈₅ Leu Gly Thr
 Pro Glu₂₉₀ Ala Pro Gly Asn Ala₂₉₅ Gly Leu Phe Asp Gln₃₀₀ Asn Leu Ala Leu
 Arg₃₀₅ Trp Val Arg Asp Asn₃₁₀ Ile His Arg Phe Gly₃₁₅ Gly Asp Pro Ser Arg₃₂₀
 Val Thr Leu Phe Gly₃₂₅ Glu Ser Ala Gly Ala₃₃₀ Val Ser Val Ser Leu₃₃₅ His
 Leu Leu Ser Ala₃₄₀ Leu Ser Arg Asp Leu₃₄₅ Phe Gln Arg Ala Ile₃₅₀ Leu Gln
 Ser Gly Ser₃₅₅ Pro Thr Ala Pro Trp₃₆₀ Ala Leu Val Ser Arg₃₆₅ Glu Glu Ala

263365US0XPCT

Thr Leu Arg Ala Leu Arg Leu Ala Glu Ala Val Asn Cys Pro His Asp
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 Ala Thr Lys Leu Ser Asp Ala Val Glu Cys Leu Arg Thr Lys Asp Pro
 385 390 395 400
 Asn Glu Leu Val Asp Asn Glu Trp Gly Thr Leu Gly Ile Cys Glu Phe
 405 410 415
 Pro Phe Val Pro Val Val Asp Gly Ala Phe Leu Asp Glu Thr Pro Gln
 420 425 430
 Arg Ser Leu Ala Ser Gly Arg Phe Lys Lys Thr Asp Ile Leu Thr Gly
 435 440 445
 Ser Asn Thr Glu Glu Gly Tyr Tyr Phe Ile Ile Tyr Tyr Leu Thr Glu
 450 455 460
 Leu Leu Arg Lys Glu Glu Gly Val Thr Val Thr Arg Glu Glu Phe Leu
 465 470 475 480
 Gln Ala Val Arg Glu Leu Asn Pro Tyr Val Asn Gly Ala Ala Arg Gln
 485 490 495
 Ala Ile Val Phe Glu Tyr Thr Asp Trp Ile Glu Pro Asp Asn Pro Asn
 500 505 510
 Ser Asn Arg Asp Ala Leu Asp Lys Met Val Gly Asp Tyr His Phe Thr
 515 520 525
 Cys Asn Val Asn Glu Phe Ala Gln Arg Tyr Ala Glu Glu Gly Asn Asn
 530 535 540
 Val Phe Met Tyr Leu Tyr Thr His Arg Ser Lys Gly Asn Pro Trp Pro
 545 550 555 560
 Arg Trp Thr Gly Val Met His Gly Asp Glu Ile Asn Tyr Val Phe Gly
 565 570 575
 Glu Pro Leu Asn Ser Ala Leu Gly Tyr Gln Asp Asp Glu Lys Asp Phe
 580 585 590
 Ser Arg Lys Ile Met Arg Tyr Trp Ser Asn Phe Ala Lys Thr Gly Asn
 595 600 605
 Pro Asn Pro Ser Thr Pro Ser Val Asp Leu Pro Glu Trp Pro Lys His
 610 615 620
 Thr Ala His Gly Arg His Tyr Leu Glu Leu Gly Leu Asn Thr Thr Phe
 625 630 635 640
 Val Gly Arg Gly Pro Arg Leu Arg Gln Cys Ala Phe Trp Lys Lys Tyr
 645 650 655
 Leu Pro Gln Leu Val Ala Ala Thr Ser Asn Leu Gln Val Thr Pro Ala
 660 665 670
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 675 680 685
 Leu Leu Ile Val Thr Leu Leu Leu Val Thr Arg Phe Lys Ile
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<210> 8
 <211> 91

<212> PRT

<213> *Culex pipiens*

<400> 8

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<212> PRT

<213> *Aedes aegypti*

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 35 40 45
 Ser Lys Gly Asn Pro Trp Pro Arg Trp Thr Gly Val Met His Gly Asp
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<212> PRT

<213> *Aedes albopictus*

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 35 40 45
 Ser Lys Gly Asn Pro Trp Pro Arg Trp Thr Gly Val Met His Gly Asp
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 85 90

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 35 40 45
 Ser Lys Gly Asn Pro Trp Pro Arg Trp Thr Gly Val Met His Gly Asp
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Page 18

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35 40 45

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Ser Lys₅₀ Gly Asn Pro Trp Pro₅₅ Arg Trp Thr Gly Val₆₀ Met His Gly Asp
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 35 40 45
 Ser Lys Gly Asn Pro Trp Pro Arg Trp Thr Gly Val Met His Gly Asp
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<212> DNA

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<212> DNA

<213> Anopheles gambiae strain KISUMU

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<400> 28
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 tacatgtatc tgtacacgca ccgtagcaaa ggcaacccgt ggccccgctg gaccgggggtg 180
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 tacatgtatc tgtacacgca ccgcagcaaa ggcaacccgt ggccgcgctg gacggggcgtg 180
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tacatgtacc	tgtacacgca	ccgaagcaaa	ggcaacccat	ggccacgctg	gacgggctgt	180
atgcacgggtg	atgagattaa	ctatgtgttc	ggggaaccgc	tcaatcccag	cctcggctac	240
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<211> 273

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<213> *Anopheles pseudopunctipennis*

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<210> 36

<211> 273

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<210> 38

<211> 273

<212> DNA

<213> *Anopheles nili*

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tacatgtacc tctacacgca ccggagcaaa ggcaatccct ggccgcgttg gacgggctgc 180
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<400> 48
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35 40 45
Glu Pro Asp Val Arg Gln Thr Thr Glu Phe Gly Asn Ser Cys Val Gln
50 55 60
Ile Asp Asp Glu Val Phe Gly Asn Phe Arg Glu Met Trp Asn Ala Pro
65 70 75 80
Asn Leu Lys Ser Glu Asp Cys Leu Tyr Leu Asn Ile Trp Thr Pro Arg
85 90 95
Ile Pro Thr Ser Thr Arg Ser Gln Pro Leu Ala Val Met Val Trp Ile
100 105 110
Tyr Gly Gly Ser Phe Tyr Ser Gly Thr Thr Ala Leu Ala Leu Tyr Asp
115 120 125
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130 135 140
Tyr Arg Leu Gly Pro Leu Gly Phe Leu Ala Pro Leu Ala Gly Thr Pro
145 150 155 160
Gly Asn Ala Gly Leu Leu Asp Gln Gln Leu Ala Leu Lys Trp Val Arg
165 170 175
Asp Asn Ile Arg Ala Phe Gly Gly Asn Pro Asp Asn Val Thr Leu Met
180 185 190
Gly Glu Ser Ala Gly Ala Ala Ser Ile Gly Leu His Thr Val Ala Pro
195 200 205
Ser Ser Arg Gly Leu Phe Asn Arg Val Ile Phe Gln Ser Gly Asn Gln
210 215 220
Met Thr Pro Trp Ser Thr Ile Ser Leu Pro Thr Ser Leu Asn Arg Thr
225 230 235 240
Arg Ile Leu Ala Ala Asn Leu Arg Cys Pro Asn Pro Arg Thr Ser Ser
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 Pro Val Arg Ser Arg His Ala Glu Pro Leu Ala Val Leu Val Trp Ile
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 Met Gly Glu Ser Ala Gly Ala Ala Ser Ile Gly Leu His Thr Ile Ala
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 Pro Ser Ser Arg Gly Leu Phe Ser Arg Val Ile Leu Gln Ser Gly Asn
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Phe Leu Tyr His Leu Ser Tyr Arg Val Ser Thr Asn Pro Trp Pro Ile
420 425 430

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 Met 115 Trp Asn 115 Pro Asn Thr Asn Val 120 Ser Glu Asp Cys 125 Leu Tyr Leu Asn
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 His Gln Ser Lys Gly 165 Gly Leu Ala Met Leu 170 Val Trp Ile Tyr Gly 175 Gly
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 Glu 225 Asp Ala Pro Gly Asn 230 Met Gly Met Trp Asp 235 Gln Ala Leu Ala Ile 240
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gtc Val	aca Thr	ctg Leu	ttc Phe	ggc Gly 325	gag Glu	agc Ser	gcc Ala	gga Gly	gcg Ala 330	gtc Val	tcg Ser	gtt Val	tcg Ser	ctg Leu 335	cac His	1008
ctg Leu	ctg Leu	tcg Ser	gcg Ala 340	ctc Leu	tcg Ser	cgg Arg	gac Asp	ctg Leu 345	ttc Phe	cag Gln	cgg Arg	gcc Ala	atc Ile 350	ctc Leu	cag Gln	1056
agt Ser	ggc Gly	tcc Ser 355	ccg Pro	acg Thr	gcc Ala	cca Pro	tgg Trp 360	gcg Ala	ctg Leu	gtt Val	tcg Ser	cgc Arg 365	gaa Glu	gaa Glu	gct Ala	1104
acg Thr 370	ctt Leu	aga Arg	gct Ala	ctt Leu	cgt Arg	ctg Leu 375	gcc Ala	gag Glu	gcc Ala	gtc Val	aac Asn 380	tgt Cys	ccg Pro	cac His	gat Asp	1152
gcg Ala 385	acc Thr	aag Lys	ctg Leu	agc Ser	gat Asp 390	gcc Ala	gtc Val	gaa Glu	tgt Cys	ctg Leu 395	cga Arg	acc Thr	aag Lys	gat Asp	ccg Pro 400	1200
aac Asn	gag Glu	ctg Leu	gtc Val	gac Asp 405	aat Asn	gag Glu	tgg Trp	ggc Gly	acg Thr 410	ctg Leu	ggg Gly	atc Ile	tgc Cys	gag Glu 415	ttt Phe	1248
ccg Pro	ttc Phe	gtt Val	ccg Pro 420	gtt Val	gtg Val	gac Asp	ggt Gly	gcc Ala 425	ttc Phe	ctc Leu	gat Asp	gag Glu	aca Thr 430	ccg Pro	cag Gln	1296
cgt Arg	tcg Ser	ttg Leu 435	gcc Ala	agc Ser	ggt Gly	cgc Arg	ttc Phe 440	aag Lys	aaa Lys	acg Thr	gac Asp	atc Ile 445	ctg Leu	acc Thr	ggc Gly	1344
agc Ser	aac Asn 450	acc Thr	gag Glu	gag Glu	ggt Gly	tac Tyr 455	tac Tyr	ttt Phe	atc Ile	att Ile	tac Tyr 460	tat Tyr	cta Leu	acc Thr	gaa Glu	1392
ctg Leu 465	ctc Leu	agg Arg	aaa Lys	gag Glu	gaa Glu 470	ggg Gly	gtc Val	acg Thr	gta Val	aca Thr 475	cgc Arg	gag Glu	gag Glu	ttc Phe	cta Leu 480	1440
cag Gln	gcc Ala	gtc Val	cgg Arg	gag Glu 485	ttg Leu	aat Asn	ccg Pro	tac Tyr	gtg Val 490	aac Asn	ggt Gly	gcc Ala	gcc Ala	cgg Arg 495	cag Gln	1488
gcc Ala	atc Ile	gtg Val	ttc Phe	gag Glu	tac Tyr	acg Thr	gac Asp	tgg Trp	atc Ile	gaa Glu	ccg Pro	gac Asp	aac Asn	ccg Pro	aac Asn	1536

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500	505	510	
agc aac cgt gac gcg ctc gac aag atg gtc ggg gat tat cac ttc acc	Ser Asn Arg Asp Ala Leu Asp Lys Met Val Gly Asp Tyr His Phe Thr	515 520 525	1584
tgc aac gtg aac gag ttc gcc cag cgg tac gcc gag gag ggc aac aat	Cys Asn Val Asn Glu Phe Ala Gln Arg Tyr Ala Glu Glu Gly Asn Asn	530 535 540	1632
gtg ttc atg tac ctg tac acg cac aga agc aaa gga aat ccc tgg ccg	Val Phe Met Tyr Leu Tyr Thr His Arg Ser Lys Gly Asn Pro Trp Pro	545 550 555 560	1680
agg tgg act ggc gtg atg cac ggc gac gag atc aac tac gtg ttt ggc	Arg Trp Thr Gly Val Met His Gly Asp Glu Ile Asn Tyr Val Phe Gly	565 570 575	1728
gaa ccg ctg aac tcg gcc ctc ggc tac cag gac gac gag aag gac ttt	Glu Pro Leu Asn Ser Ala Leu Gly Tyr Gln Asp Asp Glu Lys Asp Phe	580 585 590	1776
agc cgg aaa att atg cga tac tgg tcc aac ttt gcc aag act ggc aat	Ser Arg Lys Ile Met Arg Tyr Trp Ser Asn Phe Ala Lys Thr Gly Asn	595 600 605	1824
cca aac ccg agt acg ccg agc gtg gac ctg ccc gaa tgg ccc aag cac	Pro Asn Pro Ser Thr Pro Ser Val Asp Leu Pro Glu Trp Pro Lys His	610 615 620	1872
acc gcc cac gga cga cac tat ctg gag ctg gga ctg aac acg acc ttc	Thr Ala His Gly Arg His Tyr Leu Glu Leu Gly Leu Asn Thr Thr Phe	625 630 635 640	1920
gtg gga cgg ggc cca cga ttg cgg cag tgc gct ttc tgg aag aaa tat	Val Gly Arg Gly Pro Arg Leu Arg Gln Cys Ala Phe Trp Lys Lys Tyr	645 650 655	1968
ttg ccg caa cta gta gca gct acc tct aac ctc caa gta act ccc gcg	Leu Pro Gln Leu Val Ala Ala Thr Ser Asn Leu Gln Val Thr Pro Ala	660 665 670	2016
cct agc gta cct tgc gaa agc agc tca aca tct tat cga tcc act cta	Pro Ser Val Pro Cys Glu Ser Ser Ser Thr Ser Tyr Arg Ser Thr Leu	675 680 685	2064
ctt cta ata gtc aca cta ctt tta gta acg cgg ttc aag att taa	Leu Leu Ile Val Thr Leu Leu Leu Val Thr Arg Phe Lys Ile	690 695 700	2109

<210> 57

<211> 702

<212> PRT

<213> Culex pipiens strain SR

<400> 57

Met Glu Ile Arg Gly Leu Ile Thr Arg Leu Leu Gly Pro Cys His Leu

1

5

10

15

Arg His Leu Ile Leu Cys Ser Leu Gly Leu Tyr Ser Ile Leu Val Gln

20

25

30

Ser Val His Cys Arg His His Asp Ile Gly Ser Ser Val Ala His Gln

35

40

45

Leu Gly Ser Lys Tyr Ser Gln Ser Ser Ser Leu Ser Ser Ser Ser Gln

50

55

60

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Ser₆₅ Ser Ser Ser Leu₇₀ Ala₇₅ Glu Glu Ala Thr Leu₇₅ Asn Lys Asp Ser Asp₈₀
Ala Phe Phe Thr Pro₈₅ Tyr Ile Gly His Gly₉₀ Asp Ser Val Arg Ile₉₅ Val
Asp Ala Glu Leu₁₀₀ Gly Thr Leu Glu Arg₁₀₅ Glu His Ile His Ser₁₁₀ Thr Thr
Thr Arg Arg₁₁₅ Arg Gly Leu Thr Arg₁₂₀ Arg Glu Ser Ser Ser₁₂₅ Asp Ala Thr
Asp Ser₁₃₀ Asp Pro Leu Val Ile₁₃₅ Thr Thr Asp Lys Gly₁₄₀ Lys Ile Arg Gly
Thr Thr Leu Glu Ala Pro₁₅₀ Ser Gly Lys Lys Val₁₅₅ Asp Ala Trp Met Gly₁₆₀
Ile Pro Tyr Ala Gln₁₆₅ Pro Pro Leu Gly Pro₁₇₀ Leu Arg Phe Arg His₁₇₅ Pro
Arg Pro Ala Glu₁₈₀ Arg Trp Thr Gly Val₁₈₅ Leu Asn Ala Thr Lys₁₉₀ Pro Pro
Asn Ser Cys₁₉₅ Val Gln Ile Val Asp₂₀₀ Thr Val Phe Gly Asp₂₀₅ Phe Pro Gly
Ala Thr₂₁₀ Met Trp Asn Pro Asn₂₁₅ Thr Pro Leu Ser Glu₂₂₀ Asp Cys Leu Tyr
Ile₂₂₅ Asn Val Val Val Pro₂₃₀ Arg Pro Arg Pro Lys₂₃₅ Asn Ala Ala Val Met₂₄₀
Leu Trp Ile Phe Gly₂₄₅ Gly Ser Phe Tyr Ser₂₅₀ Gly Thr Ala Thr Leu₂₅₅ Asp
Val Tyr Asp His₂₆₀ Arg Thr Leu Ala Ser₂₆₅ Glu Glu Asn Val Ile₂₇₀ Val Val
Ser Leu Gln₂₇₅ Tyr Arg Val Ala Ser₂₈₀ Leu Gly Phe Leu Phe₂₈₅ Leu Gly Thr
Pro Glu₂₉₀ Ala Pro Gly Asn Ala₂₉₅ Gly Leu Phe Asp Gln₃₀₀ Asn Leu Ala Leu
Arg₃₀₅ Trp Val Arg Asp Asn₃₁₀ Ile His Arg Phe Gly₃₁₅ Gly Asp Pro Ser Arg₃₂₀
Val Thr Leu Phe Gly₃₂₅ Glu Ser Ala Gly Ala₃₃₀ Val Ser Val Ser Leu₃₃₅ His
Leu Leu Ser Ala₃₄₀ Leu Ser Arg Asp Leu₃₄₅ Phe Gln Arg Ala Ile₃₅₀ Leu Gln
Ser Gly Ser₃₅₅ Pro Thr Ala Pro Trp₃₆₀ Ala Leu Val Ser Arg₃₆₅ Glu Glu Ala
Thr Leu₃₇₀ Arg Ala Leu Arg Leu₃₇₅ Ala Glu Ala Val Asn₃₈₀ Cys Pro His Asp
Ala Thr₃₈₅ Lys Leu Ser Asp₃₉₀ Ala Val Glu Cys Leu₃₉₅ Arg Thr Lys Asp Pro₄₀₀
Asn Glu Leu Val Asp₄₀₅ Asn Glu Trp Gly Thr₄₁₀ Leu Gly Ile Cys Glu₄₁₅ Phe
Pro Phe Val Pro Val Val Asp Gly Ala Phe Leu Asp Glu Thr Pro Gln

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420	425	430
Arg Ser Leu Ala Ser Gly Arg Phe Lys Lys Thr Asp Ile Leu Thr Gly	440	445
Ser Asn Thr Glu Glu Gly Tyr Tyr Phe Ile Ile Tyr Tyr Leu Thr Glu	450	455
Leu Leu Arg Lys Glu Glu Gly Val Thr Val Thr Arg Glu Glu Phe Leu	465	470
Gln Ala Val Arg Glu Leu Asn Pro Tyr Val Asn Gly Ala Ala Arg Gln	485	490
Ala Ile Val Phe Glu Tyr Thr Asp Trp Ile Glu Pro Asp Asn Pro Asn	500	505
Ser Asn Arg Asp Ala Leu Asp Lys Met Val Gly Asp Tyr His Phe Thr	515	520
Cys Asn Val Asn Glu Phe Ala Gln Arg Tyr Ala Glu Glu Gly Asn Asn	530	535
Val Phe Met Tyr Leu Tyr Thr His Arg Ser Lys Gly Asn Pro Trp Pro	545	550
Arg Trp Thr Gly Val Met His Gly Asp Glu Ile Asn Tyr Val Phe Gly	565	570
Glu Pro Leu Asn Ser Ala Leu Gly Tyr Gln Asp Asp Glu Lys Asp Phe	580	585
Ser Arg Lys Ile Met Arg Tyr Trp Ser Asn Phe Ala Lys Thr Gly Asn	595	600
Pro Asn Pro Ser Thr Pro Ser Val Asp Leu Pro Glu Trp Pro Lys His	610	615
Thr Ala His Gly Arg His Tyr Leu Glu Leu Gly Leu Asn Thr Thr Phe	625	630
Val Gly Arg Gly Pro Arg Leu Arg Gln Cys Ala Phe Trp Lys Lys Tyr	645	650
Leu Pro Gln Leu Val Ala Ala Thr Ser Asn Leu Gln Val Thr Pro Ala	660	665
Pro Ser Val Pro Cys Glu Ser Ser Ser Thr Ser Tyr Arg Ser Thr Leu	675	680
Leu Leu Ile Val Thr Leu Leu Leu Val Thr Arg Phe Lys Ile	690	695
	700	

<210> 58
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 <213> Artificial Sequence

<220>
 <223> Synthetic DNA

<400> 58
 cgactcggac ccactggt

<211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic DNA

<400> 59
 gttctgatca aacagccccg c 21

<210> 60
 <211> 459
 <212> DNA
 <213> Culex pipiens pipiens strain Espro (R)

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 <222> (3)..(458)

<400> 60
 ag ggc aaa atc cgt gga acg aca ctg gaa gcg cca agt gga aag aag 47
 Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys
 1 5 10 15

gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt ccg 95
 Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro
 20 25 30

ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg 143
 Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu
 35 40 45

aac gcg acc aaa cca ccc aac tcc tgc gtc cag atc gtg gac acc gtg 191
 Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val
 50 55 60

ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccc ctc 239
 Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu
 65 70 75

tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca agg ccg agg ccc 287
 Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro
 80 85 90 95

aag aat gcc gct gtc atg ctg tgg atc ttt ggg ggt agc ttc tac tcc 335
 Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser
 100 105 110

ggg act gcc acg ttg gac gtg tac gat cat cgg acg ctg gcc tcg gag 383
 Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu
 115 120 125

gag aac gtg atc gtg gtt tcg ctg cag tac cgt gtc gca agt ctt ggt 431
 Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly
 130 135 140

ttt ctc ttc ctg ggc aca ccg gag gca c 459
 Phe Leu Phe Leu Gly Thr Pro Glu Ala
 145 150

<210> 61
 <211> 461
 <212> DNA
 <213> Culex pipiens quinquefasciatus strain ProR(S)

<220>
 <221> CDS

<222> (3)..(458)

<400> 61

ac aag ggc aaa atc cgt gga acg aca ctg gaa gcg cct agt gga aag 47
 Lys Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys
 1 5 10 15

aag gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt 95
 Lys Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly
 20 25 30

ccg ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg 143
 Pro Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val
 35 40 45

ctg aac gcg acc aaa ccg ccc aac tcc tgc gtc cag atc gtg gac acc 191
 Leu Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr
 50 55 60

gtg ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccg 239
 Val Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro
 65 70 75

ctc tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca cgg ccc agg 287
 Leu Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg
 80 85 90 95

ccc aag aat gcc gcc gtc atg ctg tgg atc ttc ggg ggt ggc ttc tac 335
 Pro Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr
 100 105 110

tcc ggg act gcc acg ctg gac gtg tac gac cac cgg acg ctg gcc tcg 383
 Ser Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser
 115 120 125

gag gag aac gtg atc gta gtt tcg ctg cag tac cgt gtc gca agt ctt 431
 Glu Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu
 130 135 140

ggg ttt ctc ttc ctg ggc aca ccg gag gca 461
 Gly Phe Leu Phe Leu Gly Thr Pro Glu
 145 150

<210> 62

<211> 448

<212> DNA

<213> Culex pipiens pipiens strain S-LAB (S)

<220>

<221> CDS

<222> (3)..(446)

<400> 62

ag ggc aaa atc cgt gga acg aca ctg gaa gcg cct agt gga aag aag 47
 Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys
 1 5 10 15

gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt ccg 95
 Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro
 20 25 30

ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg 143
 Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu
 35 40 45

aac gcg acc aaa ccg ccc aac tcc tgc gtc cag atc gtg gac acc gtg 191
 Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val
 50 55 60

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ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccg ctc Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu 65 70 75	239
tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca cgg ccc agg ccc Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro 80 85 90 95	287
aag aat gcc gcc gtc atg ctg tgg atc ttc ggg ggt ggc ttc tac tcc Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser 100 105 110	335
ggg act gcc acg ctg gac gtg tac gac cac cgg acg ctg gcc tcg gag Gly Thr Ala Thr 115 Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu 120 125	383
gag aac gtg atc gta gtt tcg ctg cag tac cgt gtc gca agt ctt ggg Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly 130 135 140	431
ttt ctc ttc ctg ggc ac Phe Leu Phe Leu Gly 145	448
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ag ggc aaa atc cgt gga acg aca ctg gaa gcg cca agt gga aag aag Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys 1 5 10 15	47
gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt ccg Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro 20 25 30	95
ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu 35 40 45	143
aac gcg acc aaa cca ccc aac tcc tgc gtc cag atc gtg gac acc gtg Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val 50 55 60	191
ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccc ctc Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu 65 70 75	239
tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca agg ccg agg ccc Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro 80 85 90 95	287
aag aat gcc gct gtc atg ctg tgg atc ttt ggg ggt agc ttc tac tcc Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser 100 105 110	335
ggg act gcc acg ttg gac gtg tac gat cat cgg acg ctg gcc tcg gag Gly Thr Ala Thr 115 Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu 120 125	383
gag aac gtg atc gtg gtt tcg ctg cag tac cgt gtc gca agt ctt ggt Page 40	431

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Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly
130 135 140

ttt ctc ttc ctg ggc aca ccg gag gca c 459
Phe Leu Phe Leu Gly Thr Pro Glu Ala

145 150

<210> 64
<211> 463
<212> DNA
<213> Culex pipiens pipiens strain Praias (R)

<220>
<221> CDS
<222> (1)..(462)

<400> 64
gac aag ggc aaa atc cgt gga acg aca ctg gaa gcg cca agt gga aag 48
Asp Lys Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys
1 5 10 15

aag gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt 96
Lys Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly
20 25 30

ccg ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg 144
Pro Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val
35 40 45

ctg aac gcg acc aaa cca ccc aac tcc tgc gtc cag atc gtg gac acc 192
Leu Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr
50 55 60

gtg ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccc 240
Val Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro
65 70 75 80

ctc tgc gag gac tgt ctg tac atc aac gtg gtc gtg cca agg ccg agg 288
Leu Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg
85 90 95

ccc aag aat gcc gct gtc atg ctg tgg atc ttt ggg ggt agc ttc tac 336
Pro Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr
100 105 110

tcc ggg act gcc acg ttg gac gtg tac gat cat cgg acg ctg gcc tcg 384
Ser Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser
115 120 125

gag gag aac gtg atc gtg gtt tgc ctg cag tac cgt gtc gca agt ctt 432
Glu Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu
130 135 140

ggt ttt ctc ttc ctg ggc aca ccg gag gca c 463
Gly Phe Leu Phe Leu Gly Thr Pro Glu Ala
145 150

<210> 65
<211> 463
<212> DNA
<213> Culex pipiens quinquefasciatus strain Supercar (R)

<220>
<221> CDS
<222> (1)..(462)

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<400> 65

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 1 5 10 15
 aag gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt 96
 Lys Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly
 20 25 30
 ccg ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg 144
 Pro Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val
 35 40 45
 ctg aac gcg acc aaa cca ccc aac tcc tgc gtc cag atc gtg gac acc 192
 Leu Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr
 50 55 60
 gtg ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccc 240
 Val Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro
 65 70 75 80
 ctc tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca agg ccg agg 288
 Leu Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg
 85 90 95
 ccc aag aat gcc gct gtc atg ctg tgg atc ttt ggg ggt agc ttc tac 336
 Pro Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr
 100 105 110
 tcc ggg act gcc acg ttg gac gtg tac gat cat cgg acg ctg gcc tcg 384
 Ser Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser
 115 120 125
 gag gag aac gtg atc gtg gtt tcg ctg cag tac cgt gtc gca agt ctt 432
 Glu Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu
 130 135 140
 ggt ttt ctc ttc ctg ggc aca ccg gag gca c 463
 Gly Phe Leu Phe Leu Gly Thr Pro Glu Ala
 145 150

<210> 66

<211> 448

<212> DNA

<213> Culex pipiens pipiens strain Bruges A (S)

<220>

<221> CDS

<222> (3)..(446)

<400> 66

ag ggc aaa atc cgt gga acg aca ctg gaa gcg cca agt gga aag aag 47
 Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys
 1 5 10 15
 gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt ccg 95
 Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro
 20 25 30
 ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg 143
 Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu
 35 40 45
 aac gcg acc aaa cca ccc aac tcc tgc gtc cag atc gtg gac acc gtg 191
 Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val
 50 55 60
 ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccc ctc 239

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Phe	Gly	Asp	Phe	Pro	Gly	Ala	Thr	Met	Trp	Asn	Pro	Asn	Thr	Pro	Leu	
	65					70					75					
tcg	gag	gac	tgt	ctg	tac	atc	aac	gtg	gtc	gtg	cca	agg	ccg	agg	ccc	287
Ser	Glu	Asp	Cys	Leu	Tyr	Ile	Asn	Val	Val	Val	Pro	Arg	Pro	Arg	Pro	
	80				85					90					95	
aag	aat	gcc	gct	gtc	atg	ctg	tgg	atc	ttt	ggg	ggt	ggc	ttc	tac	tcc	335
Lys	Asn	Ala	Ala	Val	Met	Leu	Trp	Ile	Phe	Gly	Gly	Gly	Phe	Tyr	Ser	
				100					105					110		
ggg	act	gcc	acg	ttg	gac	gtg	tac	gat	cat	cgg	acg	ctg	gcc	tcg	gag	383
Gly	Thr	Ala	Thr	Leu	Asp	Val	Tyr	Asp	His	Arg	Thr	Leu	Ala	Ser	Glu	
			115					120					125			
gag	aac	gtg	atc	gtg	gtt	tcg	ctg	cag	tac	cgt	gtc	gca	agt	ctt	ggt	431
Glu	Asn	Val	Ile	Val	Val	Ser	Leu	Gln	Tyr	Arg	Val	Ala	Ser	Leu	Gly	
		130					135					140				
ttt	ctc	ttc	ctg	ggc	ac											448
Phe	Leu	Phe	Leu	Gly												
	145															
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Gly	Lys	Ile	Arg	Gly	Thr	Thr	Leu	Glu	Ala	Pro	Ser	Gly	Lys	Lys	Val	
	1			5					10					15		
gac	gca	tgg	atg	ggc	att	ccg	tac	gcg	cag	cct	ccg	ctg	ggt	ccg	ctc	96
Asp	Ala	Trp	Met	Gly	Ile	Pro	Tyr	Ala	Gln	Pro	Pro	Leu	Gly	Pro	Leu	
			20					25					30			
cgg	ttt	cga	cat	ccg	cga	ccc	gcc	gaa	aga	tgg	acc	ggt	gtg	ctg	aac	144
Arg	Phe	Arg	His	Pro	Arg	Pro	Ala	Glu	Arg	Trp	Thr	Gly	Val	Leu	Asn	
		35					40					45				
gcg	acc	aaa	ccg	ccc	aac	tcc	tgc	gtc	cag	atc	gtg	gac	acc	gtg	ttc	192
Ala	Thr	Lys	Pro	Pro	Asn	Ser	Cys	Val	Gln	Ile	Val	Asp	Thr	Val	Phe	
	50					55					60					
ggt	gac	ttc	ccg	ggg	gcc	acc	atg	tgg	aac	ccg	aac	aca	ccg	ctc	tcg	240
Gly	Asp	Phe	Pro	Gly	Ala	Thr	Met	Trp	Asn	Pro	Asn	Thr	Pro	Leu	Ser	
	65				70					75					80	
gag	gac	tgt	ctg	tac	atc	aac	gtg	gtc	gtg	cca	cgg	ccc	agg	ccc	aag	288
Glu	Asp	Cys	Leu	Tyr	Ile	Asn	Val	Val	Val	Pro	Arg	Pro	Arg	Pro	Lys	
				85					90					95		
aat	gcc	gcc	gtc	atg	ctg	tgg	atc	ttc	ggg	ggt	agc	ttc	tac	tcc	ggg	336
Asn	Ala	Ala	Val	Met	Leu	Trp	Ile	Phe	Gly	Gly	Ser	Phe	Tyr	Ser	Gly	
			100					105					110			
act	gcc	acg	ctg	gac	gtg	tac	gac	cac	cgg	acg	ctg	gcc	tcg	gag	gag	384
Thr	Ala	Thr	Leu	Asp	Val	Tyr	Asp	His	Arg	Thr	Leu	Ala	Ser	Glu	Glu	
		115					120					125				
aac	gtg	atc	gta	gtt	tcg	ctg	cag	tac	cgt	gtc	gca	agt	ctt	ggt	ttt	432

263365US0XPCT

Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
130 135 140

ctc ttc ctg ggc aca ccg gag gca c 457
Leu Phe Leu Gly Thr Pro Glu Ala
145 150

<210> 68
<211> 447
<212> DNA
<213> Culex pipiens quinquefasciatus strain DJI (R)

<220>
<221> CDS
<222> (1)..(444)

<400> 68
ggc aaa atc cgt gga acg aca ctg gaa gcg cct agc gga aag aag gtg 48
Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
1 5 10 15

gac gca tgg atg ggc att ccg tac gcg cag cct ccg ctg ggt ccg ctc 96
Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
20 25 30

cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg aac 144
Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
35 40 45

gcg acc aaa ccg ccc aac tcc tgc gtc cag atc gtg gac acc gtg ttc 192
Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
50 55 60

ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccg ctc tcg 240
Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
65 70 75 80

gag gac tgt ctg tac atc aac gtg gtc gtg cca cgg ccc agg ccc aag 288
Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
85 90 95

aat gcc gcc gtc atg ctg tgg atc ttc ggg ggt agc ttc tac tcc ggg 336
Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser Gly
100 105 110

act gcc acg ctg gac gtg tac gac cac cgg acg ctg gcc tcg gag gag 384
Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
115 120 125

aac gtg atc gta gtt tcg ctg cag tac cgt gtc gca agt ctt ggt ttt 432
Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
130 135 140

ctc ttc ctg ggc aca 447
Leu Phe Leu Gly
145

<210> 69
<211> 457
<212> DNA
<213> Culex pipiens quinquefasciatus strain Harare (R)

<220>
<221> CDS
<222> (1)..(456)

<400> 69
ggc aaa atc cgt gga acg aca ctg gaa gcg cct agc gga aag aag gtg 48

263365US0XPCT

Gly	Lys	Ile	Arg	Gly	Thr	Thr	Leu	Glu	Ala	Pro	Ser	Gly	Lys	Lys	Val	
1				5					10					15		
gac	gca	tgg	atg	ggc	att	ccg	tac	gcg	cag	cct	ccg	ctg	ggt	ccg	ctc	96
Asp	Ala	Trp	Met	Gly	Ile	Pro	Tyr	Ala	Gln	Pro	Pro	Leu	Gly	Pro	Leu	
			20					25					30			
cgg	ttt	cga	cat	ccg	cga	ccc	gcc	gaa	aga	tgg	acc	ggt	gtg	ctg	aac	144
Arg	Phe	Arg	His	Pro	Arg	Pro	Ala	Glu	Arg	Trp	Thr	Gly	Val	Leu	Asn	
		35					40					45				
gcg	acc	aaa	ccg	ccc	aac	tcc	tgc	gtc	cag	atc	gtg	gac	acc	gtg	ttc	192
Ala	Thr	Lys	Pro	Pro	Asn	Ser	Cys	Val	Gln	Ile	Val	Asp	Thr	Val	Phe	
	50					55					60					
ggt	gac	ttc	ccg	ggg	gcc	acc	atg	tgg	aac	ccg	aac	aca	ccg	ctc	tcg	240
Gly	Asp	Phe	Pro	Gly	Ala	Thr	Met	Trp	Asn	Pro	Asn	Thr	Pro	Leu	Ser	
65				70					75						80	
gag	gac	tgt	ctg	tac	atc	aac	gtg	gtc	gtg	cca	cgg	ccc	agg	ccc	aag	288
Glu	Asp	Cys	Leu	Tyr	Ile	Asn	Val	Val	Val	Pro	Arg	Pro	Arg	Pro	Lys	
				85				90					95			
aat	gcc	gcc	gtc	atg	ctg	tgg	atc	ttc	ggg	ggt	agc	ttc	tac	tcc	ggg	336
Asn	Ala	Ala	Val	Met	Leu	Trp	Ile	Phe	Gly	Gly	Ser	Phe	Tyr	Ser	Gly	
			100					105					110			
act	gcc	acg	ctg	gac	gtg	tac	gac	cac	cgg	acg	ctg	gcc	tcg	gag	gag	384
Thr	Ala	Thr	Leu	Asp	Val	Tyr	Asp	His	Arg	Thr	Leu	Ala	Ser	Glu	Glu	
		115					120					125				
aac	gtg	atc	gta	gtt	tcg	ctg	cag	tac	cg	gtc	gca	agt	ctt	ggt	ttt	432
Asn	Val	Ile	Val	Val	Ser	Leu	Gln	Tyr	Arg	Val	Ala	Ser	Leu	Gly	Phe	
	130					135					140					
ctc	ttc	ctg	ggc	aca	ccg	gag	gca	c								457
Leu	Phe	Leu	Gly	Thr	Pro	Glu	Ala									
145					150											

<210> 70

<211> 458

<212> DNA

<213> Culex pipiens quinquefasciatus strain Martinique (R)

<220>

<221> CDS

<222> (1)..(456)

<400> 70

ggc	aaa	atc	cgt	gga	acg	aca	ctg	gaa	gcg	cct	agc	gga	aag	aag	gtg	48
Gly	Lys	Ile	Arg	Gly	Thr	Thr	Leu	Glu	Ala	Pro	Ser	Gly	Lys	Lys	Val	
1				5					10					15		
gac	gca	tgg	atg	ggc	att	ccg	tac	gcg	cag	cct	ccg	ctg	ggt	ccg	ctc	96
Asp	Ala	Trp	Met	Gly	Ile	Pro	Tyr	Ala	Gln	Pro	Pro	Leu	Gly	Pro	Leu	
			20					25					30			
cgg	ttt	cga	cat	ccg	cga	ccc	gcc	gaa	aga	tgg	acc	ggt	gtg	ctg	aac	144
Arg	Phe	Arg	His	Pro	Arg	Pro	Ala	Glu	Arg	Trp	Thr	Gly	Val	Leu	Asn	
		35					40					45				
gcg	acc	aaa	ccg	ccc	aac	tcc	tgc	gtc	cag	atc	gtg	gac	acc	gtg	ttc	192
Ala	Thr	Lys	Pro	Pro	Asn	Ser	Cys	Val	Gln	Ile	Val	Asp	Thr	Val	Phe	
	50					55					60					
ggt	gac	ttc	ccg	ggg	gcc	acc	atg	tgg	aac	ccg	aac	aca	ccg	ctc	tcg	240
Gly	Asp	Phe	Pro	Gly	Ala	Thr	Met	Trp	Asn	Pro	Asn	Thr	Pro	Leu	Ser	
65				70					75						80	

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gag gac tgt ctg tac atc aac gtg gtc gtg cca cgg ccc agg ccc aag 288
 Glu Asp Cys Leu Tyr 85 Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys 95

 aat gcc gcc gtc atg ctg tgg atc ttc ggg ggt agc ttc tac tcc ggg 336
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser Ser Gly 100 105 110

 act gcc acg ctg gac gtg tac gac cac cgg acg ctg gcc tcg gag gag 384
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu 115 120 125

 aac gtg atc gta gtt tcg ctg cag tac cgt gtc gca agt ctt ggt ttt 432
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe 130 135 140

 ctc ttc ctg ggc aca ccg gag gca cc 458
 Leu Phe Leu Gly Thr Pro Glu Ala 145 150

 <210> 71
 <211> 447
 <212> DNA
 <213> Culex pipiens pipiens strain Barriol (R)

 <220>
 <221> CDS
 <222> (3)..(446)

 <400> 71
 ag ggc aaa atc cgt gga acg aca ctg gaa gcg cca agt gga aag aag 47
 Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys 1 5 10 15

 gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt ccg 95
 Val Asp Ala Trp Met 20 Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro 25 30

 ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg 143
 Leu Arg Phe Arg 35 His Pro Arg Pro Ala 40 Glu Arg Trp Thr Gly 45 Val Leu

 aac gcg acc aaa cca ccc aac tcc tgc gtc cag atc gtg gac acc gtg 191
 Asn Ala Thr 50 Lys Pro Pro Asn Ser 55 Cys Val Gln Ile Val 60 Asp Thr Val

 ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccc ctc 239
 Phe Gly 65 Asp Phe Pro Gly Ala 70 Thr Met Trp Asn Pro 75 Asn Thr Pro Leu

 tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca agg ccg agg ccc 287
 Ser Glu Asp Cys Leu Tyr 85 Ile Asn Val Val Val Pro Arg Pro Arg Pro 80 90 95

 aag aat gcc gct gtc atg ctg tgg atc ttt ggg ggt agc ttc tac tcc 335
 Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser 100 105 110

 ggg act gcc acg ttg gac gtg tac gat cat cgg acg ctg gcc tcg gag 383
 Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu 115 120 125

 gag aac gtg atc gtg gtt tcg ctg cag tac cgt gtc gca agt ctt ggt 431
 Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly 130 135 140

 ttt ctc ttc ctg ggc a 447

Phe Leu Phe Leu Gly
145

<210> 72

<211> 447

<212> DNA

<213> Culex pipiens pipiens strain Bleuete (S)

<220>

<221> CDS

<222> (3)..(446)

<400> 72

ag ggc aaa atc cgt gga acg aca ctg gaa gcg cca agt gga aag aag 47
Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys
1 5 10 15

gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt ccg 95
Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro
20 25 30

ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg 143
Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu
35 40 45

aac gcg acc aaa cca ccc aac tcc tgc gtc cag atc gtg gac acc gtg 191
Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val
50 55 60

ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccc ctc 239
Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu
65 70 75

tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca agg ccg agg ccc 287
Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro
80 85 90 95

aag aat gcc gct gtc atg ctg tgg atc ttt ggg ggt ggc ttc tac tcc 335
Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser
100 105 110

ggg act gcc acg ttg gac gtg tac gat cat ccg acg ctg gcc tcg gag 383
Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu
115 120 125

gag aac gtg atc gtg gtt tcg ctg cag tac cgt gtc gca agt ctt ggt 431
Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly
130 135 140

ttt ctc ttc ctg ggc a 447
Phe Leu Phe Leu Gly
145

<210> 73

<211> 448

<212> DNA

<213> Culex pipiens pipiens strain Bruges B (S)

<220>

<221> CDS

<222> (3)..(446)

<400> 73

ag ggc aaa atc cgt gga acg aca ctg gaa gcg cca agt gga aag aag 47
Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys
1 5 10 15

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gtg	gac	gca	tgg	atg	ggc	att	ccg	tac	gcg	cag	ccc	ccg	ctg	ggt	ccg	95
Val	Asp	Ala	Trp	Met	Gly	Ile	Pro	Tyr	Ala	Gln	Pro	Pro	Leu	Gly	Pro	
				20					25					30		
ctc	cgg	ttt	cga	cat	ccg	cga	ccc	gcc	gaa	aga	tgg	acc	ggt	gtg	ctg	143
Leu	Arg	Phe	Arg	His	Pro	Arg	Pro	Ala	Glu	Arg	Trp	Thr	Gly	Val	Leu	
			35					40					45			
aac	gcg	acc	aaa	cca	ccc	aac	tcc	tgc	gtc	cag	atc	gtg	gac	acc	gtg	191
Asn	Ala	Thr	Lys	Pro	Pro	Asn	Ser	Cys	Val	Gln	Ile	Val	Asp	Thr	Val	
		50					55					60				
ttc	ggt	gac	ttc	ccg	ggg	gcc	acc	atg	tgg	aac	ccg	aac	aca	ccc	ctc	239
Phe	Gly	Asp	Phe	Pro	Gly	Ala	Thr	Met	Trp	Asn	Pro	Asn	Thr	Pro	Leu	
	65					70					75					
tcg	gag	gac	tgt	ctg	tac	atc	aac	gtg	gtc	gtg	cca	agg	ccg	agg	ccc	287
Ser	Glu	Asp	Cys	Leu	Tyr	Ile	Asn	Val	Val	Val	Pro	Arg	Pro	Arg	Pro	
	80				85					90					95	
aag	aat	gcc	gct	gtc	atg	ctg	tgg	atc	ttt	ggg	ggt	ggc	ttc	tac	tcc	335
Lys	Asn	Ala	Ala	Val	Met	Leu	Trp	Ile	Phe	Gly	Gly	Gly	Phe	Tyr	Ser	
				100					105					110		
ggg	act	gcc	acg	ttg	gac	gtg	tac	gat	cat	cgg	acg	ctg	gcc	tcg	gag	383
Gly	Thr	Ala	Thr	Leu	Asp	Val	Tyr	Asp	His	Arg	Thr	Leu	Ala	Ser	Glu	
			115					120					125			
gag	aac	gtg	atc	gtg	gtt	tcg	ctg	cag	tac	cgt	gtc	gca	agt	ctt	ggt	431
Glu	Asn	Val	Ile	Val	Val	Ser	Leu	Gln	Tyr	Arg	Val	Ala	Ser	Leu	Gly	
		130					135					140				
ttt	ctc	ttc	ctg	ggc	ac											448
Phe	Leu	Phe	Leu	Gly												
	145															

<210> 74

<211> 447

<212> DNA

<213> Culex pipiens pipiens strain Heteren (S)

<220>

<221> CDS

<222> (3)..(446)

<400> 74

ag	ggc	aaa	atc	cgt	gga	acg	aca	ctg	gaa	gcg	cca	agt	gga	aag	aag	47
	Gly	Lys	Ile	Arg	Gly	Thr	Thr	Leu	Glu	Ala	Pro	Ser	Gly	Lys	Lys	
	1				5				10					15		

gtg	gac	gca	tgg	atg	ggc	att	ccg	tac	gcg	cag	ccc	ccg	ctg	ggt	ccg	95
Val	Asp	Ala	Trp	Met	Gly	Ile	Pro	Tyr	Ala	Gln	Pro	Pro	Leu	Gly	Pro	
				20					25					30		

ctc	cgg	ttt	cga	cat	cca	cga	ccc	gcc	gaa	aga	tgg	acc	ggt	gtg	ctg	143
Leu	Arg	Phe	Arg	His	Pro	Arg	Pro	Ala	Glu	Arg	Trp	Thr	Gly	Val	Leu	
			35					40					45			

aac	gcg	acc	aaa	cca	ccc	aac	tcc	tgc	gtc	cag	atc	gtg	gac	aca	gtg	191
Asn	Ala	Thr	Lys	Pro	Pro	Asn	Ser	Cys	Val	Gln	Ile	Val	Asp	Thr	Val	
		50					55					60				

ttc	ggt	gac	ttc	ccg	ggg	gcc	acc	atg	tgg	aac	ccg	aac	aca	ccc	ctc	239
Phe	Gly	Asp	Phe	Pro	Gly	Ala	Thr	Met	Trp	Asn	Pro	Asn	Thr	Pro	Leu	
	65					70					75					

tcg	gag	gac	tgt	ctg	tac	atc	aac	gtg	gtc	gtg	cca	agg	ccg	agg	ccc	287

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Ser	Glu	Asp	Cys	Leu	Tyr	Ile	Asn	Val	Val	Val	Pro	Arg	Pro	Arg	Pro		
80					85					90					95		
aag	aat	gcc	gct	gtc	atg	ctg	tgg	atc	ttt	ggg	ggg	ggc	ttc	tac	tcc	335	
Lys	Asn	Ala	Ala	Val	Met	Leu	Trp	Ile	Phe	Gly	Gly	Gly	Phe	Tyr	Ser		
				100					105					110			
ggg	act	gcc	acg	ttg	gac	gtg	tac	gac	cat	cgg	acg	ctg	gcc	tcg	gaa	383	
Gly	Thr	Ala	Thr	Leu	Asp	Val	Tyr	Asp	His	Arg	Thr	Leu	Ala	Ser	Glu		
			115					120					125				
gag	aac	gtg	atc	gtg	gtt	tcg	ctg	cag	tac	cgt	gtc	gca	agt	ctt	ggg	431	
Glu	Asn	Val	Ile	Val	Val	Ser	Leu	Gln	Tyr	Arg	Val	Ala	Ser	Leu	Gly		
		130					135					140					
ttt	ctc	ttc	ctg	ggc	a											447	
Phe	Leu	Phe	Leu	Gly													
	145																
<210>	75																
<211>	450																
<212>	DNA																
<213>	Culex pipiens quinquefasciatus strain Ling (S)																
<220>																	
<221>	CDS																
<222>	(1)..(447)																
<400>	75																
cag	ggc	aaa	atc	cgt	gga	acg	aca	ctg	gaa	gcg	cct	agt	gga	aag	aag	48	
Gln	Gly	Lys	Ile	Arg	Gly	Thr	Thr	Leu	Glu	Ala	Pro	Ser	Gly	Lys	Lys		
	1			5					10					15			
gtg	gac	gcc	tgg	atg	ggc	att	ccg	tac	gcg	cag	ccc	ccg	ctg	ggg	ccg	96	
Val	Asp	Ala	Trp	Met	Gly	Ile	Pro	Tyr	Ala	Gln	Pro	Pro	Leu	Gly	Pro		
			20					25					30				
ctc	cgg	ttt	cga	cat	ccg	cga	ccc	gcc	gaa	aga	tgg	acc	ggg	gtg	ctg	144	
Leu	Arg	Phe	Arg	His	Pro	Arg	Pro	Ala	Glu	Arg	Trp	Thr	Gly	Val	Leu		
		35					40					45					
aac	gcg	acc	aaa	ccg	ccc	aac	tcc	tgc	gtc	cag	atc	gtg	gac	acc	gtg	192	
Asn	Ala	Thr	Lys	Pro	Pro	Asn	Ser	Cys	Val	Gln	Ile	Val	Asp	Thr	Val		
	50					55					60						
ttc	ggg	gac	ttc	ccg	ggg	gcc	acc	atg	tgg	aac	ccg	aac	aca	ccg	ctc	240	
Phe	Gly	Asp	Phe	Pro	Gly	Ala	Thr	Met	Trp	Asn	Pro	Asn	Thr	Pro	Leu		
	65				70					75					80		
tcg	gag	gac	tgt	ctg	tac	atc	aac	gtg	gtc	gtg	cca	cgg	ccc	agg	ccc	288	
Ser	Glu	Asp	Cys	Leu	Tyr	Ile	Asn	Val	Val	Val	Pro	Arg	Pro	Arg	Pro		
				85					90					95			
aag	aat	gcc	gcc	gtc	atg	ctg	tgg	atc	ttc	ggg	ggg	ggc	ttc	tac	tcc	336	
Lys	Asn	Ala	Ala	Val	Met	Leu	Trp	Ile	Phe	Gly	Gly	Gly	Phe	Tyr	Ser		
			100					105					110				
ggg	act	gcc	acg	ctg	gac	gtg	tat	gac	cac	cgg	acg	ctg	gcc	tcg	gag	384	
Gly	Thr	Ala	Thr	Leu	Asp	Val	Tyr	Asp	His	Arg	Thr	Leu	Ala	Ser	Glu		
			115				120					125					
gag	aac	gtg	atc	gta	gtt	tcg	ctg	cag	tac	cgt	gtc	gca	agt	ctt	ggg	432	
Glu	Asn	Val	Ile	Val	Val	Ser	Leu	Gln	Tyr	Arg	Val	Ala	Ser	Leu	Gly		
	130					135					140						
ttt	ctc	ttc	ctg	ggc	aca											450	
Phe	Leu	Phe	Leu	Gly													

145

<210> 76
 <211> 448
 <212> DNA
 <213> *Culex pipiens quinquefasciatus* strain Mao (S)

<220>
 <221> CDS
 <222> (3)..(446)

<400> 76
 ac ggc aaa atc cgt gga acg aca ctg gaa gcg cct agt gga aag aag 47
 Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys
 1 5 10 15
 gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt ccg 95
 Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro
 20 25 30
 ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg 143
 Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu
 35 40 45
 aac gcg acc aaa ccg ccc aac tcc tgc gtc cag atc gtg gac acc gtg 191
 Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val
 50 55 60
 ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccg ctc 239
 Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu
 65 70 75
 tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca cgg ccc agg ccc 287
 Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro
 80 85 90 95
 aag aat gcc gcc gtc atg ctg tgg atc ttc ggg ggt ggc ttc tac tcc 335
 Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser
 100 105 110
 ggg act gcc acg ctg gac gtg tac gac cac cgg acg ctg gcc tcg gag 383
 Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu
 115 120 125
 gag aac gtg atc gta gtt tcg ctg cag tac cgt gtc gca agt ctt ggt 431
 Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly
 130 135 140
 ttt ctc ttc ctg ggc ac 448
 Phe Leu Phe Leu Gly
 145

<210> 77
 <211> 433
 <212> DNA
 <213> *Culex pipiens quinquefasciatus* strain TemR (S)

<220>
 <221> CDS
 <222> (1)..(432)

<400> 77
 aaa atc cgt gga acg aca ctg gaa gcg cct agt gga aag aag gtg gac 48
 Lys Ile Arg Gly Thr 5 Leu Glu Ala Pro 10 Ser Gly Lys Lys Val Asp
 1 5 10
 gca tgg atg ggc att ccg tac gcg cag cct ccg ctg ggt ccg ctc cgg 96
 Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu Arg
 Page 50

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20	25	30	
ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg aac gcg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn Ala	35	40	144
acc aaa cca ccc aac tcc tgc gtc cag atc gtg gac acc gtg ttc ggt Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe Gly	50	55	192
gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccg ctc tcg gag Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser Glu	65	70	240
gac tgt ctg tac atc aac gtg gtc gtg cca cgg ccc agg ccc aag aat Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys Asn	85	90	288
gcc gcc gtc atg ctg tgg atc ttc ggg ggt ggc ttc tac tcc ggg act Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly Thr	100	105	336
gcc acg ctg gac gtg tac gac cac cgg acg ctg acc tcg gag gag aac Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Thr Ser Glu Glu Asn	115	120	384
gtg atc gta gtt tcg ctg cag tac cgt gtc gca agt ctt ggt ttt ctc t Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe Leu	130	135	433

<210> 78

<211> 448

<212> DNA

<213> Culex torrentium strain Uppsala

<220>

<221> CDS

<222> (3)..(446)

<400> 78

ag ggc aaa atc cgt gga acg aca ctg gaa gcg cca agt gga aag aag Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys	1	5	10	47
gtg gac gca tgg atg ggc att ccg tac gcg cag cct ccg ctg ggt ccg Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro	20	25	30	95
ctt cgg ttt cga cat cca cga ccc gcc gaa aga tgg acc ggt gtg ctg Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu	35	40	45	143
aac gcg acc aaa cca ccc aac tcc tgc gtc cag atc gtc gac acc gtg Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val	50	55	60	191
ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccc ctc Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu	65	70	75	239
tcg gaa gac tgt ctg tac atc aac gtt gtg gtg cca cgg ccg agg ccc Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro	80	85	90	287
aag aat gcc gcc gtc atg ctg tgg atc ttc ggg ggt gga ttc tac tcc Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser	100	105	110	335

263365US0XPCT

ggg acc gcc acg ctg gac gtg tac gac cac cgg acg ctg gcc tcg gag 383
 Gly Thr Ala Thr 115 Leu Asp Val Tyr Asp 120 His Arg Thr Leu Ala Ser Glu
 gag aac gtg atc gtg gtt tcg ctg cag tac cgt gtc gca agt ctt ggt 431
 Glu Asn Val 130 Ile Val Val Ser Leu 135 Gln Tyr Arg Val Ala 140 Ser Leu Gly
 ttt ctc ttc ctg ggc ac 448
 Phe Leu Phe Leu Gly 145

<210> 79

<211> 448

<212> DNA

<213> Culex pipiens quinquefasciatus strain Trans (S)

<220>

<221> CDS

<222> (3)..(446)

<400> 79

ag ggc aaa atc cgt gga acg aca ctg gaa gcg cct agt gga aag aag 47
 Gly Lys Ile Arg Gly 5 Thr Thr Leu Glu Ala 10 Pro Ser Gly Lys Lys 15

gtg gac gca tgg atg ggc att ccg tac gcg cag cct ccg ctg ggt ccg 95
 Val Asp Ala Trp Met 20 Gly Ile Pro Tyr Ala 25 Gln Pro Pro Leu Gly 30 Pro

ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg 143
 Leu Arg Phe Arg 35 His Pro Arg Pro Ala 40 Glu Arg Trp Thr Gly 45 Val Leu

aac gcg acc aaa cca ccc aac tcc tgc gtc cag atc gtg gac acc gtg 191
 Asn Ala Thr 50 Lys Pro Pro Asn Ser 55 Cys Val Gln Ile Val 60 Asp Thr Val

ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccg ctc 239
 Phe Gly 65 Asp Phe Pro Gly 70 Ala Thr Met Trp Asn 75 Pro Asn Thr Pro Leu

tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca cgg ccc agg ccc 287
 Ser 80 Glu Asp Cys Leu Tyr 85 Ile Asn Val Val 90 Pro Arg Pro Arg Pro 95

aag aat gcc gcc gtc atg ctg tgg atc ttc ggg ggt ggc ttc tac tcc 335
 Lys Asn Ala Ala Val 100 Met Leu Trp Ile Phe 105 Gly Gly Gly Phe Tyr Ser 110

ggg act gcc acg ctg gac gtg tac gac cac cgg acg ctg acc tcg gag 383
 Gly Thr Ala Thr 115 Leu Asp Val Tyr Asp 120 His Arg Thr Leu Thr 125 Ser Glu

gag aac gtg atc gta gtt tcg ctg cag tac cgt gtc gca agt ctt ggt 431
 Glu Asn Val 130 Ile Val Val Ser Leu 135 Gln Tyr Arg Val Ala 140 Ser Leu Gly

ttt ctc ttc ctg ggc ac 448
 Phe Leu Phe Leu Gly 145

<210> 80

<211> 412

<212> DNA

<213> Culex pipiens quinquefasciatus strain BED (S)

263365US0XPCT

<220>

<221> CDS

<222> (1)..(411)

<400> 80

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Thr	Leu	Glu	Ala	Pro	Ser	Gly	Lys	Lys	Val	Asp	Ala	Trp	Met	Gly	Ile	
1				5					10					15		
ccg	tac	gcg	cag	cct	ccg	ctg	ggt	ccg	ctc	cgg	ttt	cga	cat	ccg	cga	96
Pro	Tyr	Ala	Gln	Pro	Pro	Leu	Gly	Pro	Leu	Arg	Phe	Arg	His	Pro	Arg	
			20					25					30			
ccc	gcc	gaa	aga	tgg	acc	ggt	gtg	ctg	aac	gcg	acc	aaa	cca	ccc	aac	144
Pro	Ala	Glu	Arg	Trp	Thr	Gly	Val	Leu	Asn	Ala	Thr	Lys	Pro	Pro	Asn	
		35					40					45				
tcc	tgc	gtc	cag	atc	gtg	gac	acc	gtg	ttc	ggt	gac	ttc	ccg	ggg	gcc	192
Ser	Cys	Val	Gln	Ile	Val	Asp	Thr	Val	Phe	Gly	Asp	Phe	Pro	Gly	Ala	
	50					55					60					
acc	atg	tgg	aac	ccg	aac	aca	ccg	ctc	tcg	gag	gac	tgt	ctg	tac	atc	240
Thr	Met	Trp	Asn	Pro	Asn	Thr	Pro	Leu	Ser	Glu	Asp	Cys	Leu	Tyr	Ile	
65					70					75					80	
aac	gtg	gtc	gtg	cca	cgg	ccc	agg	ccc	aag	aat	gcc	gcc	gtc	atg	ctg	288
Asn	Val	Val	Val	Pro	Arg	Pro	Arg	Pro	Lys	Asn	Ala	Ala	Val	Met	Leu	
				85					90					95		
tgg	atc	ttc	ggg	ggt	ggc	ttc	tac	tcc	ggg	act	gcc	acg	ctg	gac	gtg	336
Trp	Ile	Phe	Gly	Gly	Gly	Phe	Tyr	Ser	Gly	Thr	Ala	Thr	Leu	Asp	Val	
			100					105					110			
tac	gac	cac	cgg	acg	ctg	gcc	tcg	gag	gag	aac	gtg	atc	gta	gtt	tcg	384
Tyr	Asp	His	Arg	Thr	Leu	Ala	Ser	Glu	Glu	Asn	Val	Ile	Val	Val	Ser	
		115					120					125				
ctg	cag	tac	cgt	gtc	gca	agt	ctt	ggt	t							412
Leu	Gln	Tyr	Arg	Val	Ala	Ser	Leu	Gly								
	130					135										

<210> 81

<211> 437

<212> DNA

<213> Culex pipiens quinquefasciatus strain BSQ (S)

<220>

<221> CDS

<222> (3)..(434)

<400> 81

ag	ggc	aaa	atc	cgt	gga	acg	aca	ctg	gaa	gcg	cct	agt	gga	aag	aag	47
	Gly	Lys	Ile	Arg	Gly	Thr	Thr	Leu	Glu	Ala	Pro	Ser	Gly	Lys	Lys	
	1				5				10					15		
gtg	gac	gcc	tgg	atg	ggc	att	ccg	tac	gcg	cag	ccc	ccg	ctg	ggt	ccg	95
Val	Asp	Ala	Trp	Met	Gly	Ile	Pro	Tyr	Ala	Gln	Pro	Pro	Leu	Gly	Pro	
				20					25					30		
ctc	cgg	ttt	cga	cat	ccg	cga	ccc	gcc	gaa	aga	tgg	acc	ggt	gtg	ctg	143
Leu	Arg	Phe	Arg	His	Pro	Arg	Pro	Ala	Glu	Arg	Trp	Thr	Gly	Val	Leu	
			35					40					45			
aac	gcg	acc	aaa	ccg	ccc	aac	tcc	tgc	gtc	cag	atc	gtg	gac	acc	gtg	191
Asn	Ala	Thr	Lys	Pro	Pro	Asn	Ser	Cys	Val	Gln	Ile	Val	Asp	Thr	Val	
		50					55					60				

263365US0XPCT

ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccg ctc	239
Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu	
65 70 75	
tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca cgg ccc agg ccc	287
Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro	
80 85 90 95	
aag aat gcc gcc gtc atg ctg tgg atc ttc ggg ggt ggc ttc tac tcc	335
Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser	
100 105 110	
ggg act gcc acg ctg gac gtg tac gac cac cgg acg ctg gcc tcg gag	383
Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu	
115 120 125	
gag aac gtg atc gta gtt tcg ctg cag tac cgt gtc gca agt ctt ggg	431
Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly	
130 135 140	
ttt ctc	437
Phe	
<210> 82	
<211> 414	
<212> DNA	
<213> Culex pipiens quinquefasciatus strain Brazza (S)	
<220>	
<221> CDS	
<222> (2)..(412)	
<400> 82	
a ctg gaa gcg cct agt gga aag aag gtg gac gcc tgg atg ggc att ccg	49
Leu Glu Ala Pro Ser Gly Lys Lys Val Asp Ala Trp Met Gly Ile Pro	
1 5 10 15	
tac gcg cag ccc ccg ctg ggt ccg ctc cgg ttt cga cat ccg cga ccc	97
Tyr Ala Gln Pro Pro Leu Gly Pro Leu Arg Phe Arg His Pro Arg Pro	
20 25 30	
gcc gaa aga tgg acc ggt gtg ctg aac gcg acc aaa ccg ccc aac tcc	145
Ala Glu Arg Trp Thr Gly Val Leu Asn Ala Thr Lys Pro Pro Asn Ser	
35 40 45	
tgc gtc cag atc gtg gac acc gtg ttc ggt gac ttc ccg ggg gcc acc	193
Cys Val Gln Ile Val Asp Thr Val Phe Gly Asp Phe Pro Gly Ala Thr	
50 55 60	
atg tgg aac ccg aac aca ccg ctc tcg gag gac tgt ctg tac atc aac	241
Met Trp Asn Pro Asn Thr Pro Leu Ser Glu Asp Cys Leu Tyr Ile Asn	
65 70 75 80	
gtg gtc gtg cca cgg ccc agg ccc aag aat gcc gcc gtc atg ctg tgg	289
Val Val Val Pro Arg Pro Arg Pro Lys Asn Ala Ala Val Met Leu Trp	
85 90 95	
atc ttc ggg ggt ggc ttc tac tcc ggg act gcc acg ctg gac gtg tac	337
Ile Phe Gly Gly Gly Phe Tyr Ser Gly Thr Ala Thr Leu Asp Val Tyr	
100 105 110	
gac cac cgg acg ctg gcc tcg gag gag aac gtg atc gta gtt tcg ctg	385
Asp His Arg Thr Leu Ala Ser Glu Glu Asn Val Ile Val Val Ser Leu	
115 120 125	
cag tac cgt gtc gca agt ctt ggg ttt ct	414
Gln Tyr Arg Val Ala Ser Leu Gly Phe	
130 135	

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<210> 83
 <211> 437
 <212> DNA
 <213> Culex pipiens quinquefasciatus strain Bouake (R)

<220>
 <221> CDS
 <222> (3)..(434)

<400> 83
 ag ggc aaa atc cgt gga acg aca ctg gaa gcg cct agt gga aag aag 47
 Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys
 1 5 10 15
 gtg gac gca tgg atg ggc att ccg tac gcg cag ccc ccg ctg ggt ccg 95
 Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro
 20 25 30
 ctc cgg ttt cga cat ccg cga ccc gcc gaa aga tgg acc ggt gtg ctg 143
 Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu
 35 40 45
 aac gcg acc aaa ccg ccc aac tcc tgc gtc cag atc gtg gac acc gtg 191
 Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val
 50 55 60
 ttc ggt gac ttc ccg ggg gcc acc atg tgg aac ccg aac aca ccg ctc 239
 Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu
 65 70 75
 tcg gag gac tgt ctg tac atc aac gtg gtc gtg cca cgg ccc agg ccc 287
 Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro
 80 85 90 95
 aag aat gcc gcc gtc atg ctg tgg atc ttc ggg ggt ggc ttc tac tcc 335
 Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser
 100 105 110
 ggg act gcc acg ctg gac gtg tac gac cac cgg acg ctg gcc tcg gag 383
 Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu
 115 120 125
 gag aac gtg atc gta gtt tcg ctg cag tac cgt gtc gca agt ctt ggt 431
 Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly
 130 135 140
 ttt ctc 437
 Phe

<210> 84
 <211> 416
 <212> DNA
 <213> Culex pipiens quinquefasciatus strain Thai (S)

<220>
 <221> CDS
 <222> (1)..(414)

<400> 84
 aca ctg gaa gcg cct agt gga aag aag gtg gac gcc tgg atg ggc att 48
 Thr Leu Glu Ala Pro Ser Gly Lys Lys Val Asp Ala Trp Met Gly Ile
 1 5 10 15
 ccg tac gcg cag ccc ccg ctg ggt ccg ctc cgg ttt cga cat ccg cga 96
 Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu Arg Phe Arg His Pro Arg
 20 25 30

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ccc gcc gaa aga tgg acc ggt gtg ctg aac gcg acc aaa ccg ccc aac	144
Pro Ala Glu Arg Trp Thr Gly Val Leu Asn Ala Thr Lys Pro Pro Asn	
35 40 45	
tcc tgc gtc cag atc gtg gac acc gtg ttc ggt gac ttc ccg ggg gcc	192
Ser Cys Val Gln Ile Val Asp Thr Val Phe Gly Asp Phe Pro Gly Ala	
50 55 60	
acc atg tgg aac ccg aac aca ccg ctc tcg gag gac tgt ctg tac atc	240
Thr Met Trp Asn Pro Asn Thr Pro Leu Ser Glu Asp Cys Leu Tyr Ile	
65 70 75 80	
aac gtg gtc gtg cca cgg ccc agg ccc aag aat gcc gcc gtc atg ctg	288
Asn Val Val Val Pro Arg Pro Arg Pro Lys Asn Ala Ala Val Met Leu	
85 90 95	
tgg atc ttc ggg ggt ggc ttc tac tcc ggg act gcc acg ctg gac gtg	336
Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly Thr Ala Thr Leu Asp Val	
100 105 110	
tac gac cac cgg acg ctg gcc tcg gag gag aac gtg atc gta gtt tcg	384
Tyr Asp His Arg Thr Leu Ala Ser Glu Glu Asn Val Ile Val Val Ser	
115 120 125	
ctg cag tac cgt gtc gca agt ctt ggg ttt ct	416
Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe	
130 135	

<210> 85

<211> 426

<212> DNA

<213> Culex pipiens quinquefasciatus strain Madurai (S)

<220>

<221> CDS

<222> (3)..(425)

<400> 85

ca ctg gaa gcg cct agt gga aag aag gtg gac gca tgg atg ggc att	47
Leu Glu Ala Pro Ser Gly Lys Lys Val Asp Ala Trp Met Gly Ile	
1 5 10 15	
ccg tac gcg cag ccc ccg ctg ggt ccg ctc ccg ttt cga cat ccg cga	95
Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu Arg Phe Arg His Pro Arg	
20 25 30	
ccc gcc gaa aga tgg acc ggt gtg ctg aac gca acc aaa ccg ccc aac	143
Pro Ala Glu Arg Trp Thr Gly Val Leu Asn Ala Thr Lys Pro Pro Asn	
35 40 45	
tcc tgc gtc cag atc gtg gac acc gtg ttc ggt gac ttc ccg ggg gcc	191
Ser Cys Val Gln Ile Val Asp Thr Val Phe Gly Asp Phe Pro Gly Ala	
50 55 60	
acc atg tgg aac ccg aac aca ccg ctc tcg gag gac tgt ctg tac atc	239
Thr Met Trp Asn Pro Asn Thr Pro Leu Ser Glu Asp Cys Leu Tyr Ile	
65 70 75	
aac gtg gtc gtg cca cgg ccc agg ccc aag aat gcc gcc gtc atg ctg	287
Asn Val Val Val Pro Arg Pro Arg Pro Lys Asn Ala Ala Val Met Leu	
80 85 90 95	
tgg atc ttc ggg ggt ggc ttc tac tcc ggg act gcc acg ctg gac gtg	335
Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly Thr Ala Thr Leu Asp Val	
100 105 110	
tac gac cac cgg acg ctg gcc tcg gag gag aac gtg atc gta gtt tcg	383

263365US0XPCT

Tyr Asp His Arg Thr Leu Ala Ser Glu Glu Asn Val Ile Val Val Ser
115 120 125

ctg cag tac cgt gtc gca agt ctt ggg ttt ctc ttc ctg ggc a 426
Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe Leu Phe Leu Gly
130 135 140

<210> 86
<211> 423
<212> DNA
<213> Culex pipiens quinquefasciatus strain Recife (R)

<220>
<221> CDS
<222> (1)..(423)

<400> 86
ctg gaa gcg cct agc gga aag aag gtg gac gca tgg atg ggc att ccg 48
Leu Glu Ala Pro Ser Gly Lys Lys Val Asp Ala Trp Met Gly Ile Pro
1 5 10 15

tac gcg cag cct ccg ctg ggt ccg ctc cgg ttt cga cat ccg cga ccc 96
Tyr Ala Gln Pro Pro Leu Gly Pro Leu Arg Phe Arg His Pro Arg Pro
20 25 30

gcc gaa aga tgg acc ggt gtg ctg aac gcg acc aaa ccg ccc aac tcc 144
Ala Glu Arg Trp Thr Gly Val Leu Asn Ala Thr Lys Pro Pro Asn Ser
35 40 45

tgc gtc cag atc gtg gac acc gtg ttc ggt gac ttc ccg ggg gcc acc 192
Cys Val Gln Ile Val Asp Thr Val Phe Gly Asp Phe Pro Gly Ala Thr
50 55 60

atg tgg aac ccg aac aca ccg ctc tcg gag gac tgt ctg tac atc aac 240
Met Trp Asn Pro Asn Thr Pro Leu Ser Glu Asp Cys Leu Tyr Ile Asn
65 70 75 80

gtg gtc gtg cca ccg ccc agg ccc aag aat gcc gcc gtc atg ctg tgg 288
Val Val Val Pro Arg Pro Arg Pro Lys Asn Ala Ala Val Met Leu Trp
85 90 95

atc ttc ggg ggt agc ttc tac tcc ggg act gcc acg ctg gac gtg tac 336
Ile Phe Gly Gly Ser Phe Tyr Ser Gly Thr Ala Thr Leu Asp Val Tyr
100 105 110

gac cac ccg acg ctg gcc tcg gag gag aac gtg atc gta gtt tcg ctg 384
Asp His Arg Thr Leu Ala Ser Glu Glu Asn Val Ile Val Val Ser Leu
115 120 125

cag tac cgt gtc gca agt ctt ggt ttt ctc ttc ctg ggc 423
Gln Tyr Arg Val Ala Ser Leu Gly Phe Leu Phe Leu Gly
130 135 140

<210> 87
<211> 416
<212> DNA
<213> Culex pipiens quinquefasciatus strain Brasil (S)

<220>
<221> CDS
<222> (3)..(413)

<400> 87
ca ctg gaa gcg cct agt gga aag aag gtg gac gca tgg atg ggc att 47
Leu Glu Ala Pro Ser Gly Lys Lys Val Asp Ala Trp Met Gly Ile
1 5 10 15

263365US0XPCT

ccg	tac	gcg	cag	ccc	ccg	ctg	ggt	ccg	ctc	cg	ttt	cga	cat	ccg	cga	95
Pro	Tyr	Ala	Gln	Pro	Pro	Leu	Gly	Pro	Leu	Arg	Phe	Arg	His	Pro	Arg	
				20					25					30		
ccc	gcc	gaa	aga	tgg	acc	ggt	gtg	ctg	aac	gcg	acc	aaa	ccg	ccc	aac	143
Pro	Ala	Glu	Arg	Trp	Thr	Gly	Val	Leu	Asn	Ala	Thr	Lys	Pro	Pro	Asn	
			35					40					45			
tcc	tgc	gtc	cag	atc	gtg	gac	acc	gtg	ttc	ggt	gac	ttc	ccg	ggg	gcc	191
Ser	Cys	Val	Gln	Ile	Val	Asp	Thr	Val	Phe	Gly	Asp	Phe	Pro	Gly	Ala	
		50					55					60				
acc	atg	tgg	aac	ccg	aac	aca	ccg	ctc	tcg	gag	gac	tgt	ctg	tac	atc	239
Thr	Met	Trp	Asn	Pro	Asn	Thr	Pro	Leu	Ser	Glu	Asp	Cys	Leu	Tyr	Ile	
	65					70					75					
aac	gtg	gtc	gtg	cca	cgg	ccc	agg	ccc	aag	aat	gcc	gcc	gtc	atg	ctg	287
Asn	Val	Val	Val	Pro	Arg	Pro	Arg	Pro	Lys	Asn	Ala	Ala	Val	Met	Leu	
80					85					90					95	
tgg	atc	ttc	ggg	ggt	ggc	ttc	tat	tcc	ggg	act	gcc	acg	ctg	gac	gtg	335
Trp	Ile	Phe	Gly	Gly	Gly	Phe	Tyr	Ser	Gly	Thr	Ala	Thr	Leu	Asp	Val	
				100					105					110		
tac	gac	cac	cgg	acg	ctg	gcc	tcg	gag	gag	aac	gtg	atc	gta	gtt	tcg	383
Tyr	Asp	His	Arg	Thr	Leu	Ala	Ser	Glu	Glu	Asn	Val	Ile	Val	Val	Ser	
			115					120					125			
ctg	cag	tac	cgt	gtc	gca	agt	ctt	ggg	ttt	ctc						416
Leu	Gln	Tyr	Arg	Val	Ala	Ser	Leu	Gly	Phe							
		130					135									

<210> 88

<211> 418

<212> DNA

<213> Culex pipiens quinquefasciatus strain Moorea (S)

<220>

<221> CDS

<222> (1)..(417)

<400> 88

aca	ctg	gaa	gcg	cct	agt	gga	aag	aag	gtg	gac	gca	tgg	atg	ggc	att	48
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1				5					10					15		
ccg	tac	gcg	cag	cct	ccg	ctg	ggt	ccg	ctc	cg	ttt	cga	cat	ccg	cga	96
Pro	Tyr	Ala	Gln	Pro	Pro	Leu	Gly	Pro	Leu	Arg	Phe	Arg	His	Pro	Arg	
			20					25					30			
ccc	gcc	gaa	aga	tgg	acc	ggt	gtg	ctg	aac	gcg	acc	aaa	ccg	ccc	aac	144
Pro	Ala	Glu	Arg	Trp	Thr	Gly	Val	Leu	Asn	Ala	Thr	Lys	Pro	Pro	Asn	
		35					40					45				
tcc	tgc	gtc	cag	atc	gtg	gac	acc	gtg	ttc	ggt	gac	ttc	ccg	ggg	gcc	192
Ser	Cys	Val	Gln	Ile	Val	Asp	Thr	Val	Phe	Gly	Asp	Phe	Pro	Gly	Ala	
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Thr	Met	Trp	Asn	Pro	Asn	Thr	Pro	Leu	Ser	Glu	Asp	Cys	Leu	Tyr	Ile	
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Asn	Val	Val	Val	Pro	Arg	Pro	Arg	Pro	Lys	Asn	Ala	Ala	Val	Met	Leu	
				85					90					95		
tgg	atc	ttc	ggg	ggt	ggc	ttc	tac	tcc	ggg	act	gcc	acg	ctg	gac	gtg	336
Trp	Ile	Phe	Gly	Gly	Gly	Phe	Tyr	Ser	Gly	Thr	Ala	Thr	Leu	Asp	Val	

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	85 90 95		
ggc ttc tac tcc ggg act gcc acg ttg gac gtg tac gat cat cgg acg	Gly Phe Tyr Ser Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr		336
	100 105 110		
ctg gcc tcg gag gag aac gtg atc gtg gtt tcg ctg cag tac cgt gtc	Leu Ala Ser Glu Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val		384
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<211> 152			
<212> PRT			
<213> Culex pipiens pipiens strain Espro (R)			
<400> 90			
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	1 5 10 15		
Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu			
	20 25 30		

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Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly Thr Pro Glu Ala
 145 150

<210> 91

<211> 152

<212> PRT

<213> Culex pipiens quinquefasciatus strain ProR(S)

<400> 91

Lys Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys
 1 5 10 15
 Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro
 20 25 30
 Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu
 35 40 45
 Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val
 50 55 60
 Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu
 65 70 75 80
 Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro
 85 90 95
 Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser
 100 105 110
 Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu
 115 120 125
 Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly
 130 135 140
 Phe Leu Phe Leu Gly Thr Pro Glu
 145 150

<210> 92

<211> 148

<212> PRT

<213> Culex pipiens pipiens strain S-LAB (S)

<400> 92

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Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly
 145

<210> 93

<211> 152

<212> PRT

<213> Culex pipiens pipiens strain Padova (R)

<400> 93

Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly Thr Pro Glu Ala
 145 150

<210> 94

<211> 154

263365US0XPCT

<212> PRT

<213> Culex pipiens pipiens strain Praias (R)

<400> 94

Asp Lys Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys
 1 5 10 15
 Lys Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly
 20 25 30
 Pro Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val
 35 40 45
 Leu Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr
 50 55 60
 Val Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro
 65 70 75 80
 Leu Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg
 85 90 95
 Pro Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr
 100 105 110
 Ser Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser
 115 120 125
 Glu Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu
 130 135 140
 Gly Phe Leu Phe Leu Gly Thr Pro Glu Ala
 145 150

<210> 95

<211> 154

<212> PRT

<213> Culex pipiens quinquefasciatus strain Supercar (R)

<400> 95

Asp Lys Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys
 1 5 10 15
 Lys Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly
 20 25 30
 Pro Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val
 35 40 45
 Leu Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr
 50 55 60
 Val Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro
 65 70 75 80
 Leu Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg
 85 90 95
 Pro Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr
 100 105 110
 Ser Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser
 115 120 125
 Glu Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu
 130 135 140
 Gly Phe Leu Phe Leu Gly Thr Pro Glu Ala

145

150

<210> 96

<211> 148

<212> PRT

<213> Culex pipiens pipiens strain Bruges A (S)

<400> 96

Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly
 145

<210> 97

<211> 152

<212> PRT

<213> Culex pipiens quinquefasciatus strain BO (R)

<400> 97

Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly
 145

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115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly Thr Pro Glu Ala
 145 150
 <210> 98
 <211> 148
 <212> PRT
 <213> Culex pipiens quinquefasciatus strain DJI (R)
 <400> 98
 Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly
 145

<210> 99
 <211> 152
 <212> PRT
 <213> Culex pipiens quinquefasciatus strain Harare (R)

<400> 99
 Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95

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Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly Thr Pro Glu Ala
 145 150

<210> 100

<211> 152

<212> PRT

<213> Culex pipiens quinquefasciatus strain Martinique (R)

<400> 100

Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly Thr Pro Glu Ala
 145 150

<210> 101

<211> 148

<212> PRT

<213> Culex pipiens pipiens strain Barriol (R)

<400> 101

Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80

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<210> 102
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<212> PRT
<213> Culex pipiens pipiens strain Bleuet (S)

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<210> 103
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<212> PRT
<213> Culex pipiens pipiens strain Bruges B (S)
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<400> 103
Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
1 5 10 15
Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
20 25 30
Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
35 40 45
Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
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60

50

55

60

Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
65 70 75 80
Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
85 90 95
Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly
100 105 110
Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
115 120 125
Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
130 135 140
Leu Phe Leu Gly
145

<210> 104
<211> 148
<212> PRT
<213> Culex pipiens pipiens strain Heteren (S)

<400> 104
Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
1 5 10 15
Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
20 25 30
Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
35 40 45
Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
50 55 60
Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
65 70 75 80
Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
85 90 95
Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly
100 105 110
Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
115 120 125
Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
130 135 140
Leu Phe Leu Gly
145

<210> 105
<211> 149
<212> PRT
<213> Culex pipiens quinquefasciatus strain Ling (S)

<400> 105
Gln Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys
1 5 10 15
Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro
20 25 30

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Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu
 35 40 45
 Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val
 50 55 60
 Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu
 65 70 75 80
 Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro
 85 90 95
 Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser
 100 105 110
 Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu
 115 120 125
 Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly
 130 135 140
 Phe Leu Phe Leu Gly
 145

<210> 106

<211> 148

<212> PRT

<213> Culex pipiens quinquefasciatus strain Mao (S)

<400> 106

Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly
 145

<210> 107

<211> 144

<212> PRT

<213> Culex pipiens quinquefasciatus strain TemR (S)

<400> 107

Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val Asp
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1 5 10 15
 Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu Arg
 20 25 30
 Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn Ala
 35 40 45
 Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe Gly
 50 55 60
 Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser Glu
 65 70 75 80
 Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys Asn
 85 90 95
 Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly Thr
 100 105 110
 Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Thr Ser Glu Glu Asn
 115 120 125
 Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe Leu
 130 135 140

<210> 108

<211> 148

<212> PRT

<213> Culex torrentium strain Uppsala

<400> 108

Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Ala Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140

Leu Phe Leu Gly
 145

<210> 109

<211> 148

<212> PRT

<213> Culex pipiens quinquefasciatus strain Trans (S)

<400> 109

263365US0XPCT

Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
 1 5 10 15
 Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu
 20 25 30
 Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp Thr Gly Val Leu Asn
 35 40 45
 Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe
 50 55 60
 Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser
 65 70 75 80
 Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro Arg Pro Arg Pro Lys
 85 90 95
 Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly
 100 105 110
 Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr Leu Thr Ser Glu Glu
 115 120 125
 Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe
 130 135 140
 Leu Phe Leu Gly
 145

<210> 110

<211> 137

<212> PRT

<213> Culex pipiens quinquefasciatus strain BED (S)

<400> 110

Thr Leu Glu Ala Pro Ser Gly Lys Lys Val Asp Ala Trp Met Gly Ile
 1 5 10 15
 Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu Arg Phe Arg His Pro Arg
 20 25 30
 Pro Ala Glu Arg Trp Thr Gly Val Leu Asn Ala Thr Lys Pro Pro Asn
 35 40 45
 Ser Cys Val Gln Ile Val Asp Thr Val Phe Gly Asp Phe Pro Gly Ala
 50 55 60
 Thr Met Trp Asn Pro Asn Thr Pro Leu Ser Glu Asp Cys Leu Tyr Ile
 65 70 75 80
 Asn Val Val Val Pro Arg Pro Arg Pro Lys Asn Ala Ala Val Met Leu
 85 90 95
 Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly Thr Ala Thr Leu Asp Val
 100 105 110
 Tyr Asp His Arg Thr Leu Ala Ser Glu Glu Asn Val Ile Val Val Ser
 115 120 125
 Leu Gln Tyr Arg Val Ala Ser Leu Gly
 130 135

<210> 111

<211> 144

<212> PRT

<213> Culex pipiens quinquefasciatus strain BSQ (S)

263365US0XPCT

<400> 111

Gly₁ Lys Ile Arg Gly₅ Thr Thr Leu Glu Ala₁₀ Pro Ser Gly Lys Lys Val
 Asp Ala Trp Met₂₀ Gly Ile Pro Tyr Ala₂₅ Gln Pro Pro Leu Gly₃₀ Pro Leu
 Arg Phe Arg₃₅ His Pro Arg Pro Ala₄₀ Glu Arg Trp Thr Gly₄₅ Val Leu Asn
 Ala Thr Lys₅₀ Pro Pro Asn Ser₅₅ Cys Val Gln Ile Val₆₀ Asp Thr Val Phe
 Gly₆₅ Asp Phe Pro Gly Ala₇₀ Thr Met Trp Asn₇₅ Asn Thr Pro Leu Ser₈₀
 Glu Asp Cys Leu Tyr₈₅ Ile Asn Val Val₉₀ Val Pro Arg Pro Arg₉₅ Pro Lys
 Asn Ala Ala Val₁₀₀ Met Leu Trp Ile Phe₁₀₅ Gly Gly Gly Phe Tyr₁₁₀ Ser Gly
 Thr Ala Thr₁₁₅ Leu Asp Val Tyr Asp₁₂₀ His Arg Thr Leu Ala₁₂₅ Ser Glu Glu
 Asn Val₁₃₀ Ile Val Val Ser Leu₁₃₅ Gln Tyr Arg Val Ala₁₄₀ Ser Leu Gly Phe

<210> 112

<211> 137

<212> PRT

<213> Culex pipiens quinquefasciatus strain Brazza (S)

<400> 112

Leu₁ Glu Ala Pro Ser₅ Gly Lys Lys Val Asp₁₀ Ala Trp Met Gly Ile₁₅ Pro
 Tyr Ala Gln Pro₂₀ Pro Leu Gly Pro Leu₂₅ Arg Phe Arg His Pro₃₀ Arg Pro
 Ala Glu Arg₃₅ Trp Thr Gly Val Leu₄₀ Asn Ala Thr Lys₄₅ Pro Pro Asn Ser
 Cys Val₅₀ Gln Ile Val Asp Thr₅₅ Val Phe Gly Asp Phe₆₀ Pro Gly Ala Thr
 Met₆₅ Trp Asn Pro Asn Thr₇₀ Pro Leu Ser Glu Asp₇₅ Cys Leu Tyr Ile Asn₈₀
 Val Val Val Pro₈₅ Arg Pro Arg Pro Lys Asn₉₀ Ala Ala Val Met Leu₉₅ Trp
 Ile Phe Gly Gly₁₀₀ Gly Phe Tyr Ser Gly₁₀₅ Thr Ala Thr Leu Asp₁₁₀ Val Tyr
 Asp His Arg₁₁₅ Thr Leu Ala Ser Glu₁₂₀ Glu Asn Val Ile Val₁₂₅ Val Ser Leu
 Gln Tyr Arg Val Ala Ser Leu₁₃₅ Gly Phe

<210> 113

<211> 144

<212> PRT

<213> Culex pipiens quinquefasciatus strain Bouake (R)

<400> 113

Gly Lys Ile Arg Gly Thr Thr Leu Glu Ala Pro Ser Gly Lys Lys Val
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263365US0XPCT

1				5				10				15			
Asp	Ala	Trp	Met ₂₀	Gly	Ile	Pro	Tyr	Ala ₂₅	Gln	Pro	Pro	Leu	Gly ₃₀	Pro	Leu
Arg	Phe	Arg ₃₅	His	Pro	Arg	Pro	Ala ₄₀	Glu	Arg	Trp	Thr	Gly ₄₅	Val	Leu	Asn
Ala	Thr ₅₀	Lys	Pro	Pro	Asn	Ser ₅₅	Cys	Val	Gln	Ile	Val ₆₀	Asp	Thr	Val	Phe
Gly ₆₅	Asp	Phe	Pro	Gly	Ala ₇₀	Thr	Met	Trp	Asn	Pro ₇₅	Asn	Thr	Pro	Leu	Ser ₈₀
Glu	Asp	Cys	Leu	Tyr ₈₅	Ile	Asn	Val	Val	Val ₉₀	Pro	Arg	Pro	Arg	Pro ₉₅	Lys
Asn	Ala	Ala	Val ₁₀₀	Met	Leu	Trp	Ile	Phe ₁₀₅	Gly	Gly	Gly	Phe	Tyr ₁₁₀	Ser	Gly
Thr	Ala	Thr ₁₁₅	Leu	Asp	Val	Tyr	Asp ₁₂₀	His	Arg	Thr	Leu	Ala ₁₂₅	Ser	Glu	Glu
Asn	Val ₁₃₀	Ile	Val	Val	Ser	Leu ₁₃₅	Gln	Tyr	Arg	Val	Ala ₁₄₀	Ser	Leu	Gly	Phe

<210> 114

<211> 138

<212> PRT

<213> *Culex pipiens quinquefasciatus* strain Thai (S)

<400> 114

Thr 1	Leu	Glu	Ala	Pro 5	Ser	Gly	Lys	Lys	Val 10	Asp	Ala	Trp	Met	Gly 15	Ile
Pro	Tyr	Ala	Gln 20	Pro	Pro	Leu	Gly	Pro 25	Leu	Arg	Phe	Arg	His 30	Pro	Arg
Pro	Ala	Glu 35	Arg	Trp	Thr	Gly	Val 40	Leu	Asn	Ala	Thr	Lys 45	Pro	Pro	Asn
Ser	Cys 50	Val	Gln	Ile	Val	Asp 55	Thr	Val	Phe	Gly	Asp 60	Phe	Pro	Gly	Ala
Thr 65	Met	Trp	Asn	Pro	Asn 70	Thr	Pro	Leu	Ser	Glu 75	Asp	Cys	Leu	Tyr	Ile 80

Asn	Val	Val	Val	Pro ₈₅	Arg	Pro	Arg	Pro	Lys ₉₀	Asn	Ala	Ala	Val	Met ₉₅	Leu
Trp	Ile	Phe	Gly ₁₀₀	Gly	Gly	Phe	Tyr	Ser ₁₀₅	Gly	Thr	Ala	Thr	Leu ₁₁₀	Asp	Val
Tyr	Asp	His ₁₁₅	Arg	Thr	Leu	Ala	Ser ₁₂₀	Glu	Glu	Asn	Val	Ile ₁₂₅	Val	Val	Ser
Leu	Gln ₁₃₀	Tyr	Arg	Val	Ala	Ser ₁₃₅	Leu	Gly	Phe						

<210> 115

<211> 141

<212> PRT

<213> *Culex pipiens quinquefasciatus* strain Madurai (S)

<400> 115

Leu Glu Ala Pro Ser Gly Lys Lys Val Asp Ala Trp Met Gly Ile Pro
Page 72

263365US0XPCT

1				5				10				15			
Tyr	Ala	Gln	Pro ₂₀	Pro	Leu	Gly	Pro	Leu ₂₅	Arg	Phe	Arg	His	Pro ₃₀	Arg	Pro
Ala	Glu	Arg ₃₅	Trp	Thr	Gly	Val	Leu ₄₀	Asn	Ala	Thr	Lys	Pro ₄₅	Pro	Asn	Ser
Cys	Val ₅₀	Gln	Ile	Val	Asp	Thr ₅₅	Val	Phe	Gly	Asp	Phe ₆₀	Pro	Gly	Ala	Thr
Met ₆₅	Trp	Asn	Pro	Asn	Thr ₇₀	Pro	Leu	Ser	Glu	Asp ₇₅	Cys	Leu	Tyr	Ile	Asn ₈₀
Val	Val	Val	Pro	Arg ₈₅	Pro	Arg	Pro	Lys	Asn ₉₀	Ala	Ala	Val	Met	Leu ₉₅	Trp
Ile	Phe	Gly	Gly ₁₀₀	Gly	Phe	Tyr	Ser	Gly ₁₀₅	Thr	Ala	Thr	Leu	Asp ₁₁₀	Val	Tyr
Asp	His	Arg ₁₁₅	Thr	Leu	Ala	Ser	Glu ₁₂₀	Glu	Asn	Val	Ile	Val ₁₂₅	Val	Ser	Leu
Gln	Tyr ₁₃₀	Arg	Val	Ala	Ser	Leu ₁₃₅	Gly	Phe	Leu	Phe	Leu ₁₄₀	Gly			

<210> 116

<211> 141

<212> PRT

<213> *Culex pipiens quinquefasciatus* strain Recife (R)

<400> 116

Leu 1	Glu	Ala	Pro	Ser 5	Gly	Lys	Lys	Val	Asp 10	Ala	Trp	Met	Gly	Ile 15	Pro
Tyr	Ala	Gln	Pro 20	Pro	Leu	Gly	Pro	Leu 25	Arg	Phe	Arg	His	Pro 30	Arg	Pro
Ala	Glu	Arg 35	Trp	Thr	Gly	Val	Leu 40	Asn	Ala	Thr	Lys	Pro 45	Pro	Asn	Ser
Cys	Val 50	Gln	Ile	Val	Asp	Thr 55	Val	Phe	Gly	Asp	Phe 60	Pro	Gly	Ala	Thr
Met 65	Trp	Asn	Pro	Asn	Thr 70	Pro	Leu	Ser	Glu	Asp 75	Cys	Leu	Tyr	Ile	Asn 80
Val	Val	Val	Pro	Arg 85	Pro	Arg	Pro	Lys	Asn 90	Ala	Ala	Val	Met	Leu 95	Trp
Ile	Phe	Gly	Gly 100	Ser	Phe	Tyr	Ser	Gly 105	Thr	Ala	Thr	Leu	Asp 110	Val	Tyr
Asp	His	Arg 115	Thr	Leu	Ala	Ser	Glu 120	Glu	Asn	Val	Ile	Val 125	Val	Ser	Leu
Gln	Tyr 130	Arg	Val	Ala	Ser	Leu 135	Gly	Phe	Leu	Phe	Leu 140	Gly			

<210> 117

<211> 137

<212> PRT

<213> *Culex pipiens quinquefasciatus* strain Brasil (S)

<400> 117

Leu Glu Ala Pro Ser Gly Lys Lys Val Asp Ala Trp Met Gly Ile Pro
1 5 10 15

263365US0XPCT

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Ala Glu Arg Trp Thr Gly Val Leu Asn Ala Thr Lys Pro Pro Asn Ser
35 40 45
Cys Val Gln Ile Val Asp Thr Val Phe Gly Asp Phe Pro Gly Ala Thr
50 55 60
Met Trp Asn Pro Asn Thr Pro Leu Ser Glu Asp Cys Leu Tyr Ile Asn
65 70 75 80
Val Val Val Pro Arg Pro Arg Pro Lys Asn Ala Ala Val Met Leu Trp
85 90 95
Ile Phe Gly Gly Gly Phe Tyr Ser Gly Thr Ala Thr Leu Asp Val Tyr
100 105 110
Asp His Arg Thr Leu Ala Ser Glu Glu Asn Val Ile Val Val Ser Leu
115 120 125
Gln Tyr Arg Val Ala Ser Leu Gly Phe
130 135

<210> 118

<211> 139

<212> PRT

<213> Culex pipiens quinquefasciatus strain Moorea (S)

<400> 118

Thr Leu Glu Ala Pro Ser Gly Lys Lys Val Asp Ala Trp Met Gly Ile
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Pro Tyr Ala Gln Pro Pro Leu Gly Pro Leu Arg Phe Arg His Pro Arg
20 25 30
Pro Ala Glu Arg Trp Thr Gly Val Leu Asn Ala Thr Lys Pro Pro Asn
35 40 45
Ser Cys Val Gln Ile Val Asp Thr Val Phe Gly Asp Phe Pro Gly Ala
50 55 60
Thr Met Trp Asn Pro Asn Thr Pro Leu Ser Glu Asp Cys Leu Tyr Ile
65 70 75 80
Asn Val Val Val Pro Arg Pro Arg Pro Lys Asn Ala Ala Val Met Leu
85 90 95
Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly Thr Ala Thr Leu Asp Val
100 105 110
Tyr Asp His Arg Thr Leu Ala Ser Glu Glu Asn Val Ile Val Val Ser
115 120 125
Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe Leu
130 135

<210> 119

<211> 134

<212> PRT

<213> Culex pipiens pipiens strain Killcare (S)

<400> 119

Ser Gly Lys Lys Val Asp Ala Trp Met Gly Ile Pro Tyr Ala Gln Pro
1 5 10 15

263365US0XPCT

Pro Leu Gly Pro Leu Arg Phe Arg His Pro Arg Pro Ala Glu Arg Trp
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 Thr Gly Val Leu Asn Ala Thr Lys Pro Pro Asn Ser Cys Val Gln Ile
 35 40 45
 Val Asp Thr Val Phe Gly Asp Phe Pro Gly Ala Thr Met Trp Asn Pro
 50 55 60
 Asn Thr Pro Leu Ser Glu Asp Cys Leu Tyr Ile Asn Val Val Val Pro
 65 70 75 80
 Arg Pro Arg Pro Lys Asn Ala Ala Val Met Leu Trp Ile Phe Gly Gly
 85 90 95
 Gly Phe Tyr Ser Gly Thr Ala Thr Leu Asp Val Tyr Asp His Arg Thr
 100 105 110
 Leu Ala Ser Glu Glu Asn Val Ile Val Val Ser Leu Gln Tyr Arg Val
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 Ala Ser Leu Gly Phe Leu
 130

<210> 120

<211> 2527

<212> DNA

<213> Anopheles gambiae strain YAO

<400> 120

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gagtt	ggg	ca	cgctc	gagca	tgtaca	acagt	ggag	caac	gc	cg	ggc	gac	g	cggtc	240
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gcaaga	aggt	ggac	gtgt	gg	cg	catt	c	ctac	g	ccca	g	ccg	g	gtc	480
ggttc	cgta	tc	cg	ggcc	g	ccg	aaa	agt	ggac	cg	g	cg	g	gtc	540
ccaac	agct	cg	tc	agatc	gt	gg	acac	cg	gtt	c	gg	c	g	g	600
ggaac	ccgaa	cac	g	ccctg	tc	cg	agg	act	gt	ct	gt	acat	taac	gtgt	660
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tgctg	ctgca	gtacc	gcgt	g	gcc	agt	ctgt	g	ctt	c	ct	gtt	tct	cg	840
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tcac	catcta	ctac	ctg	acc	gag	ctg	ctgc	gca	agg	agga	ggg	cg	tg	acc	gtg	ac	1560
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cgat	cggtt	cg	agt	acac	gact	gg	accg	ag	ccg	g	acaa	ccc	ga	ac	agc	a	1680
cgat	ggacaa	gat	ggt	ggg	gact	at	ca	ct	gcaa	cgt	ga	ac	gag	ttc	gc	g	1740
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tgcg	atactg	gt	cta	acttt	g	ccaaa	ac	cg	gta	agt	gtg	tgt	gt	caaac	ag	ca	1980
caatag	ctct	aac	acc	agcg	tctt	ct	ctct	ctc	t	tac	agcaa	tc	caa	atcc	aac	ac	2040
gcag	cgaatt	cccc	gag	tg	cca	ag	caca	ccg	ccc	ac	g	g	ca	ct	at	ctg	2100
gcct	caacac	gtc	ctt	cg	g	tc	ggg	g	cac	g	gtt	gag	gc	gtg	g	cc	2160
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263365US0XPCT

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<210> 121

<211> 2214

<212> DNA

<213> Anopheles gambiae strain YAO

<220>

<221> CDS

<222> (1)..(2214)

<400> 121

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1 5 10 15

atg gtt ccg ctg ggt ctg ctc ggc gtg acc gcg ctg cta cta atc ctg 96
Met Val Pro Leu Gly Leu Leu Gly Val Thr Ala Leu Leu Leu Ile Leu
20 25 30

cca ccc tcc gcg ctg gtg cag ggc cgg cac cac gag ctc aac aat ggt 144
Pro Pro Ser Ala Leu Val Gln Gly Arg His His Glu Leu Asn Asn Gly
35 40 45

gcc gcc atc gga tcg cat cag ctg tcg gct gcc gcc ggt gtt ggc ctt 192
Ala Ala Ile Gly Ser His Gln Leu Ser Ala Ala Ala Gly Val Gly Leu
50 55 60

tcc tcc cag tcc gcc cag tcc gga tcg ctc gca tcc ggt gtg atg tca 240
Ser Ser Gln Ser Ala Gln Ser Gly Ser Leu Ala Ser Gly Val Met Ser
65 70 75 80

tcc gtt cct gct gcc gga gcg tca tcc tcc tcc tcg tcg tcg ctg ctg 288
Ser Val Pro Ala Ala Gly Ala Ser Ser Ser Ser Ser Ser Leu Leu
85 90 95

tca tcg tca gcc gag gac gac gtg gcg cgc att act ctc agc aag gac 336
Ser Ser Ser Ala Glu Asp Asp Val Ala Arg Ile Thr Leu Ser Lys Asp
100 105 110

gca gac gca ttt ttt aca cca tat ata ggt cac ggt gag tcc gca cga 384
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115 120 125

att ata gat gcc gag ttg ggc acg ctc gag cat gta cac agt gga gca 432
Ile Ile Asp Ala Glu Leu Gly Thr Leu Glu His Val His Ser Gly Ala
130 135 140

acg ccg cgg cga cgc ggt ctg acg agg cgc gag tca aac tcg gac gcg 480
Thr Pro Arg Arg Arg Gly Leu Thr Arg Arg Glu Ser Asn Ser Asp Ala
145 150 155 160

aac gac aac gat ccg ctg gtg gtc aac acg gat aag ggg cgc atc cgc 528
Asn Asp Asn Asp Pro Leu Val Val Asn Thr Asp Lys Gly Arg Ile Arg
165 170 175

ggc att acg gtc gat gcc ccc agc ggc aag aag gtg gac gtg tgg ctc 576
Gly Ile Thr Val Asp Ala Pro Ser Gly Lys Lys Val Asp Val Trp Leu
180 185 190

ggc att ccc tac gcc cag ccg ccg gtc ggc ccg cta cgg ttc cgt cat 624
Gly Ile Pro Tyr Ala Gln Pro Pro Val Gly Pro Leu Arg Phe Arg His

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263365US0XPCT

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ccc Pro 225	aac Asn	agc Ser	tgc Cys	gtg Val	cag Gln 230	atc Ile	gtg Val	gac Asp	acc Thr	gtg Val 235	ttc Phe	ggc Gly	gac Asp	ttc Phe	ccg Pro 240	720
ggc Gly	gcg Ala	acc Thr	atg Met	tgg Trp 245	aac Asn	ccg Pro	aac Asn	acg Thr	ccc Pro 250	ctg Leu	tcc Ser	gag Glu	gac Asp	tgt Cys 255	ctg Leu	768
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cta Leu	cgc Arg	tgg Trp	gtg Val 340	cgg Arg	gac Asp	aac Asn	att Ile	cac His 345	cgg Arg	ttc Phe	ggt Gly	ggt Gly	gat Asp 350	ccg Pro	tcg Ser	1056
cgc Arg	gtg Val	aca Thr 355	ctg Leu	ttc Phe	ggc Gly	gag Glu	agt Ser 360	gcc Ala	ggt Gly	gcc Ala	gtc Val	tcg Ser 365	gtg Val	tcg Ser	ctg Leu	1104
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gcc Ala	acg Thr	cta Leu	aga Arg	gca Ala 405	ctg Leu	cgg Arg	ttg Leu	gcc Ala	gag Glu 410	gcg Ala	gtc Val	ggc Gly	tgc Cys	ccg Pro 415	cac His	1248
gaa Glu	ccg Pro	agc Ser	aag Lys 420	ctg Leu	agc Ser	gat Asp	gcg Ala	gtc Val 425	gag Glu	tgt Cys	ctg Leu	cgc Arg	ggc Gly 430	aag Lys	gat Asp	1296
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263365US0XPCT																		
465											470	475					480	
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aac Asn 545	agc Ser	aac Asn	cgg Arg	gac Asp	gcg Ala 550	ctg Leu	gac Asp	aag Lys	atg Met	gtg Val 555	ggc Gly	gac Asp	tat Tyr	cac His	ttc Phe 560	1680		
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aac Asn	gtc Val	tac Tyr	atg Met 580	tat Tyr	ctg Leu	tac Tyr	acg Thr	cac His 585	cgc Arg	agc Ser	aaa Lys	ggc Gly	aac Asn 590	ccg Pro	tgg Trp	1776		
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cac His	acc Thr	gcc Ala	cac His 660	gga Gly	cgg Arg	cac His	tat Tyr	ctg Leu 665	gag Glu	ctg Leu	ggc Gly	ctc Leu	aac Asn 670	acg Thr	tcc Ser	2016		
ttc Phe	gtc Val	ggt Gly 675	cgg Arg	ggc Gly	cca Pro	cgg Arg	ttg Leu 680	agg Arg	cag Gln	tgt Cys	gcc Ala	ttc Phe 685	tgg Trp	aag Lys	aag Lys	2064		
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ctg Leu	atc Ile	gtg Val	ctg Leu	ctg Leu 725	gtg Val	tcg Ser	ctg Leu	ctt Leu	acg Thr 730	gcg Ala	acc Thr	gtc Val	aga Arg	ttc Phe 735	ata Ile	2208		
caa Gln	taa															2214		

<210> 122
 <211> 737
 <212> PRT
 <213> Anopheles gambiae strain YAO

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 Met Val Pro Leu Gly Leu Leu Gly Val Thr Ala Leu Leu Leu Ile Leu
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 Pro Pro Ser Ala Leu Val Gln Gly Arg His His Glu Leu Asn Asn Gly
 35 40 45
 Ala Ala Ile Gly Ser His Gln Leu Ser Ala Ala Ala Gly Val Gly Leu
 50 55 60
 Ser Ser Gln Ser Ala Gln Ser Gly Ser Leu Ala Ser Gly Val Met Ser
 65 70 75 80
 Ser Val Pro Ala Ala Gly Ala Ser Ser Ser Ser Ser Ser Ser Leu Leu
 85 90 95
 Ser Ser Ser Ala Glu Asp Asp Val Ala Arg Ile Thr Leu Ser Lys Asp
 100 105 110
 Ala Asp Ala Phe Phe Thr Pro Tyr Ile Gly His Gly Glu Ser Ala Arg
 115 120 125
 Ile Ile Asp Ala Glu Leu Gly Thr Leu Glu His Val His Ser Gly Ala
 130 135 140
 Thr Pro Arg Arg Arg Gly Leu Thr Arg Arg Glu Ser Asn Ser Asp Ala
 145 150 155 160
 Asn Asp Asn Asp Pro Leu Val Val Asn Thr Asp Lys Gly Arg Ile Arg
 165 170 175
 Gly Ile Thr Val Asp Ala Pro Ser Gly Lys Lys Val Asp Val Trp Leu
 180 185 190
 Gly Ile Pro Tyr Ala Gln Pro Pro Val Gly Pro Leu Arg Phe Arg His
 195 200 205
 Pro Arg Pro Ala Glu Lys Trp Thr Gly Val Leu Asn Thr Thr Thr Pro
 210 215 220
 Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe Gly Asp Phe Pro
 225 230 235 240
 Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser Glu Asp Cys Leu
 245 250 255
 Tyr Ile Asn Val Val Ala Pro Arg Pro Arg Pro Lys Asn Ala Ala Val
 260 265 270
 Met Leu Trp Ile Phe Gly Gly Ser Phe Tyr Ser Gly Thr Ala Thr Leu
 275 280 285
 Asp Val Tyr Asp His Arg Ala Leu Ala Ser Glu Glu Asn Val Ile Val
 290 295 300
 Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe Leu Phe Leu Gly
 305 310 315 320

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Thr	Pro	Glu	Ala	Pro	Gly	Asn	Ala	Gly	Leu	Phe	Asp	Gln	Asn	Leu	Ala
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Leu	Arg	Trp	Val	Arg	Asp	Asn	Ile	His	Arg	Phe	Gly	Gly	Asp	Pro	Ser
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Arg	Val	Thr	Leu	Phe	Gly	Glu	Ser	Ala	Gly	Ala	Val	Ser	Val	Ser	Leu
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His	Leu	Leu	Ser	Ala	Leu	Ser	Arg	Asp	Leu	Phe	Gln	Arg	Ala	Ile	Leu
	370					375					380				
Gln	Ser	Gly	Ser	Pro	Thr	Ala	Pro	Trp	Ala	Leu	Val	Ser	Arg	Glu	Glu
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Ala	Thr	Leu	Arg	Ala	Leu	Arg	Leu	Ala	Glu	Ala	Val	Gly	Cys	Pro	His
				405					410					415	
Glu	Pro	Ser	Lys	Leu	Ser	Asp	Ala	Val	Glu	Cys	Leu	Arg	Gly	Lys	Asp
			420					425					430		
Pro	His	Val	Leu	Val	Asn	Asn	Glu	Trp	Gly	Thr	Leu	Gly	Ile	Cys	Glu
		435					440					445			
Phe	Pro	Phe	Val	Pro	Val	Val	Asp	Gly	Ala	Phe	Leu	Asp	Glu	Thr	Pro
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Gln	Arg	Ser	Leu	Ala	Ser	Gly	Arg	Phe	Lys	Lys	Thr	Glu	Ile	Leu	Thr
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Gly	Ser	Asn	Thr	Glu	Glu	Gly	Tyr	Tyr	Phe	Ile	Ile	Tyr	Tyr	Leu	Thr
				485					490					495	
Glu	Leu	Leu	Arg	Lys	Glu	Glu	Gly	Val	Thr	Val	Thr	Arg	Glu	Glu	Phe
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Leu	Gln	Ala	Val	Arg	Glu	Leu	Asn	Pro	Tyr	Val	Asn	Gly	Ala	Ala	Arg
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Gln	Ala	Ile	Val	Phe	Glu	Tyr	Thr	Asp	Trp	Thr	Glu	Pro	Asp	Asn	Pro
	530					535					540				
Asn	Ser	Asn	Arg	Asp	Ala	Leu	Asp	Lys	Met	Val	Gly	Asp	Tyr	His	Phe
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Thr	Cys	Asn	Val	Asn	Glu	Phe	Ala	Gln	Arg	Tyr	Ala	Glu	Glu	Gly	Asn
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Asn	Val	Tyr	Met	Tyr	Leu	Tyr	Thr	His	Arg	Ser	Lys	Gly	Asn	Pro	Trp
			580					585					590		
Pro	Arg	Trp	Thr	Gly	Val	Met	His	Gly	Asp	Glu	Ile	Asn	Tyr	Val	Phe
		595					600					605			
Gly	Glu	Pro	Leu	Asn	Pro	Thr	Leu	Gly	Tyr	Thr	Glu	Asp	Glu	Lys	Asp
	610					615					620				
Phe	Ser	Arg	Lys	Ile	Met	Arg	Tyr	Trp	Ser	Asn	Phe	Ala	Lys	Thr	Gly
625					630					635					640
Asn	Pro	Asn	Pro	Asn	Thr	Ala	Ser	Ser	Glu	Phe	Pro	Glu	Trp	Pro	Lys
				645					650					655	
His	Thr	Ala	His	Gly	Arg	His	Tyr	Leu	Glu	Leu	Gly	Leu	Asn	Thr	Ser
			660					665					670		
Phe	Val	Gly	Arg	Gly	Pro	Arg	Leu	Arg	Gln	Cys	Ala	Phe	Trp	Lys	Lys
		675					680					685			

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Tyr Leu Pro Gln Leu Val Ala Ala Thr Ser Asn Leu Pro Gly Pro Ala
 690 695 700
 Pro Pro Ser Glu Pro Cys Glu Ser Ser Ala Phe Phe Tyr Arg Pro Asp
 705 710 715 720
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 Met Val Pro Leu Gly Leu Leu Gly Val Thr Ala Leu Leu Leu Ile Leu
 20 25 30
 cca ccc tcc gcg ctg gtg cag ggc cgg cac cac gag ctc aac aat ggt 144
 Pro Pro Ser Ala Leu Val Gln Gly Arg His His Glu Leu Asn Asn Gly
 35 40 45
 gcc gcc atc gga tcg cat cag ctg tcg gct gcc gcc ggt gtt ggc ctt 192
 Ala Ala Ile Gly Ser His Gln Leu Ser Ala Ala Ala Gly Val Gly Leu
 50 55 60
 tcc tcc cag tcc gcc cag tcc gga tcg ctc gca tcc ggt gtg atg tca 240
 Ser Ser Gln Ser Ala Gln Ser Gly Ser Leu Ala Ser Gly Val Met Ser
 65 70 75 80

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tca Ser	tcg Ser	tca Ser	gcc Ala 100	gag Glu	gac Asp	gac Asp	gtg Val	gcg Ala 105	cgc Arg	att Ile	act Thr	ctc Leu	agc Ser 110	aag Lys	gac Asp	336
gca Ala	gac Asp	gca Ala 115	ttt Phe	ttt Phe	aca Thr	cca Pro	tat Tyr 120	ata Ile	ggc Gly	cac His	ggc Gly	gag Glu 125	tcc Ser	gta Val	cga Arg	384
att Ile	ata Ile 130	gat Asp	gcc Ala	gag Glu	ttg Leu	ggc Gly 135	acg Thr	ctc Leu	gag Glu	cat His	gtc Val 140	cac His	agt Ser	gga Gly	gca Ala	432
acg Thr 145	ccg Pro	cgg Arg	cga Arg	cgc Arg	ggt Gly 150	ctg Leu	acg Thr	agg Arg	cgc Arg	gag Glu 155	tcc Ser	aac Asn	tcg Ser	gac Asp	gcg Ala 160	480
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ggc Gly	att Ile	acg Thr	gtc Val 180	gat Asp	gcg Ala	ccc Pro	agc Ser	ggc Gly 185	aag Lys	aag Lys	gtg Val	gac Asp	gtg Val 190	tgg Trp	ctc Leu	576
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cta Leu	cgc Arg	tgg Trp	gtg Val 340	cgg Arg	gac Asp	aac Asn	att Ile	cac His 345	cgg Arg	ttc Phe	ggc Gly	ggc Gly	gat Asp 350	ccg Pro	tcg Ser	1056

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cat His	ctg Leu 370	ctg Leu	tcc Ser	gcc Ala	ctg Leu	tcc Ser 375	cgc Arg	gat Asp	ctg Leu	ttc Phe	cag Gln 380	cgg Arg	gcc Ala	atc Ile	ctg Leu	1152
cag Gln 385	agc Ser	ggc Gly	tcg Ser	ccg Pro	acg Thr 390	gca Ala	ccg Pro	tgg Trp	gca Ala	ttg Leu 395	gta Val	tcg Ser	cgc Arg	gag Glu	gaa Glu 400	1200
gcc Ala	acg Thr	cta Leu	aga Arg	gca Ala 405	ctg Leu	cgg Arg	ttg Leu	gcc Ala	gag Glu 410	gcg Ala	gtc Val	ggc Gly	tgc Cys	ccg Pro 415	cac His	1248
gaa Glu	ccg Pro	agc Ser	aag Lys 420	ctg Leu	agc Ser	gat Asp	gcg Ala	gtc Val 425	gag Glu	tgt Cys	ctg Leu	cgc Arg	ggc Gly 430	aag Lys	gat Asp	1296
ccg Pro	cac His	gtg Val 435	ctg Leu	gtc Val	aac Asn	aac Asn	gag Glu 440	tgg Trp	ggc Gly	acg Thr	ctc Leu	ggc Gly 445	att Ile	tgc Cys	gag Glu	1344
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ccg Pro 705	ccc Pro	agt Ser	gaa Glu	ccg Pro	tgc Cys 710	gaa Glu	agc Ser	agc Ser	gca Ala	ttt Phe 715	ttt Phe	tac Tyr	cga Arg	cct Pro	gat Asp 720	2160
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 85 90 95
 Ser Ser Ser Ala Glu Asp Asp Val Ala Arg Ile Thr Leu Ser Lys Asp
 100 105 110
 Ala Asp Ala Phe Phe Thr Pro Tyr Ile Gly His Gly Glu Ser Val Arg
 115 120 125
 Ile Ile Asp Ala Glu Leu Gly Thr Leu Glu His Val His Ser Gly Ala
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 145 150 155 160

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 Gly Ile Thr Val Asp Ala Pro Ser Gly Lys Lys Val Asp Val Trp Leu
 180 185 190
 Gly Ile Pro Tyr Ala Gln Pro Pro Val Gly Pro Leu Arg Phe Arg His
 195 200 205
 Pro Arg Pro Ala Glu Lys Trp Thr Gly Val Leu Asn Thr Thr Thr Pro
 210 215 220
 Pro Asn Ser Cys Val Gln Ile Val Asp Thr Val Phe Gly Asp Phe Pro
 225 230 235 240
 Gly Ala Thr Met Trp Asn Pro Asn Thr Pro Leu Ser Glu Asp Cys Leu
 245 250 255
 Tyr Ile Asn Val Val Ala Pro Arg Pro Arg Pro Lys Asn Ala Ala Val
 260 265 270
 Met Leu Trp Ile Phe Gly Gly Gly Phe Tyr Ser Gly Thr Ala Thr Leu
 275 280 285
 Asp Val Tyr Asp His Arg Ala Leu Ala Ser Glu Glu Asn Val Ile Val
 290 295 300
 Val Ser Leu Gln Tyr Arg Val Ala Ser Leu Gly Phe Leu Phe Leu Gly
 305 310 315 320
 Thr Pro Glu Ala Pro Gly Asn Ala Gly Leu Phe Asp Gln Asn Leu Ala
 325 330 335
 Leu Arg Trp Val Arg Asp Asn Ile His Arg Phe Gly Gly Asp Pro Ser
 340 345 350
 Arg Val Thr Leu Phe Gly Glu Ser Ala Gly Ala Val Ser Val Ser Leu
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 His Leu Leu Ser Ala Leu Ser Arg Asp Leu Phe Gln Arg Ala Ile Leu
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 450 455 460
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 Gly Ser Asn Thr Glu Glu Gly Tyr Tyr Phe Ile Ile Tyr Tyr Leu Thr
 485 490 495
 Glu Leu Leu Arg Lys Glu Glu Gly Val Thr Val Thr Arg Glu Glu Phe
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 Leu Gln Ala Val Arg Glu Leu Asn Pro Tyr Val Asn Gly Ala Ala Arg
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 Gln Ala Ile Val Phe Glu Tyr Thr Asp Trp Thr Glu Pro Asp Asn Pro
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 565 570 575
 Asn Val Tyr Met Tyr Leu Tyr Thr His Arg Ser Lys Gly Asn Pro Trp
 580 585 590
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 Phe Ser Arg Lys Ile Met Arg Tyr Trp Ser Asn Phe Ala Lys Thr Gly
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